

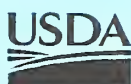
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Service**



Importation of Logs, Lumber, and Other Unmanufactured Wood Articles

**Final Supplement to the
Environmental Impact
Statement, May 1998**

**United States
Department of
Agriculture**



National Agricultural Library

Importation of Logs, Lumber, and Other Unmanufactured Wood Articles

Final Supplement to the Environmental Impact Statement, May 1998

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Table of Contents

Summary of Supplement to the Environmental Impact Statement	iii
I. Introduction	1
A. Background	1
B. Historical Perspective	4
C. Relationship to the Environmental Impact Statement	6
D. Relationship to the Rulemaking Process	7
E. Summary of the Environmental Impact Statement	8
F. Summary of the Economic Analysis	10
II. Purpose and Need	13
III. Court Orders	15
A. Introduction	15
B. Point 1—Uncertainty of Efficacy of Combinations of Methods	15
C. Point 2—Omission of Important Information	16
1. Risk Assessments and Control Measures	16
2. Compliance by Exporting Countries	17
3. Human Health Effects of Control Efforts	17
D. Point 3—Comparison of the Alternatives	17
IV. Environmental Analysis	19
A. Point 1—Efficacy of Combinations of Methods	19
1. Introduction	19
2. Potential Future Imports	20
3. Risk Assessments and Combinations of Methods	21
B. Point 2—Important Additional Information	28
1. Risk Assessment and Control Measures	28
2. Compliance by Exporting Countries	33
3. Human Health Effects of Control and Eradication Efforts	44
C. Point 3—Comparison of the Alternatives	55
1. Introduction	55
2. Summary of Pest Prevention Methods	62
3. Example Shipment of Wood Products	65
4. Summary of Environmental Consequences of Alternatives	67
5. Individual Ranking of Environmental Consequences of Alternatives	69
D. Additional Updated Information	79
1. GAO Audit of Agricultural Inspection	81
2. Suppression/Eradication Strategies	82
3. Methyl Bromide Use	86
4. New Methods and Techniques	87
5. Summary of Pest Risk Assessment for Logs From Mexico	90
6. Information on Effectiveness of the Wood Import Regulation	92
V. Preparers and Reviewers	95

VI.	References Cited	97
VII.	Appendices	
	A. Summary of Public Comments on the Draft Supplement to the Environmental Impact Statement	A-1
	B. Court Documents	B-1
	C. Documents Related to Compliance	C-1
	D. Acronyms	D-1
	E. Glossary	E-1
	F. Final Rule on Importation of Logs, Lumber, and Other Unmanufactured Wood Articles	F-1

Tables

1	Estimated First Year Welfare Impact on U.S. Society	11
4-1	Efficacy of Mitigation Measures Available for Pests and Pathogens Associated With Russian Timber Imported to the United States	23
4-2	Regulatory Requirements for Imported Logs From Chile or New Zealand	25
4-3	Raw Logs—Pathogens and Pests vs. Mitigation	26
4-4	Raw Logs—Pathogens and Pests vs. Mitigation	26
4-5	Universal Permit Regulatory Requirements for Wood Imports	27
4-6	Ability to Import Various Types of Wood Commodities Under Each of the Six Alternatives	55
4-7	Alternative 2: Key Aspects of Subpart 40 Definition of Regulated Articles	58
4-8	Requirements for Specified Articles	58
4-9	Universal Importation Requirements	60
4-10	Requirements for General Permits	61
4-11	Example Shipment of Wood Products Under Each Alternative	66
4-12	Alternatives and Methyl Bromide Use	72
4-13	Amount (in Metric Tons) of Methyl Bromide Used to Fumigate Imports of Logs, Lumber, and Other Unmanufactured Wood Products	87

Figures

1	Timeline for the EIS, Regulation, and SEIS.	4
2	Relative Ranking of Alternatives With Regard to Their Ability to Exclude Pests and Their Environmental Consequences	68

Summary of Supplement to the Environmental Impact Statement

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), is charged with preventing the introduction and dissemination of exotic animal and plant pests and pathogens in the United States for the purpose of protecting its agricultural, aquacultural, and forest resources. One of the ways APHIS accomplishes its mission is through regulating imports, such as agricultural items and plant-related materials, that may harbor plant pests.

In early 1990, APHIS began to receive inquiries from the wood products industry regarding the possibility of importing large quantities of logs, lumber, and other unmanufactured wood articles from sources other than Canada (the traditional source of imported wood articles). The initial requests were from Siberia. This was soon followed by inquiries for log imports from New Zealand and Chile. In order to determine the potential of such imports to introduce exotic plant pests, APHIS requested the U.S. Forest Service to conduct pest risk assessments. APHIS' wood import regulation was based, in part, upon the results of the risk assessments, careful analysis of available mitigation measures, consideration of comments from the public and industry, and the results of an environmental impact statement (EIS) that was completed in 1994 pursuant to the National Environmental Policy Act (NEPA). The regulation became effective in August 1995 and was subsequently challenged in Federal court, in part, on grounds that the NEPA component of the rulemaking was deficient. The U.S. District Court for the Northern District of California agreed that the EIS was lacking in certain respects and, on June 5, 1997, enjoined the issuance of new import permits for the importation of certain unfinished nontropical wood articles under the 1995 regulation, pending, in part, the correction of deficiencies in the EIS that were cited in the court's order. The primary purpose of this Supplement to the EIS (SEIS) is to fulfill this court ruling.

The court found the EIS to be deficient in three areas:

- the EIS assumes without examination that individually ineffective control measures will be effective collectively;
- the EIS omits significant information concerning uncertainties in the risk assessments and control measures, compliance by exporting countries, and human health effects of control measures; and
- the EIS lacked an adequate comparison of the alternatives considered.

This SEIS specifically addresses the court's areas of concern and provides additional updated information that has become available since the EIS was published in 1994.

The SEIS explains in much greater detail the process that was used in developing the requirements of the wood import regulation. This included evaluating pest risk through the use of pest risk assessments and evaluating the various mitigation measures available to arrive at a series of measures that, when used in sequence, are effective in reducing pest risk to a negligible level. The SEIS discusses the uncertainties in the pest risk assessments and control measures. It discusses the Agricultural Quarantine Inspection (AQI) program, of which the wood import regulation is a part, and discusses how noncompliance is handled by the AQI program. It also discusses, in general terms, the potential human health effects of pest mitigation actions. Specific pest management programs, as they are developed and planned, will be subject to site specific analyses to ensure that potential impacts to human health are known prior to implementation. The six alternatives are compared through a ranking of each alternative relative to its potential effects on each of the seven areas of potential impact that were discussed in the EIS. These seven areas are human health, forest resources, biodiversity, methyl bromide use (impact to the ozone layer), global climate change, cultural resources, and endangered and threatened species.

In addition to addressing the court-identified deficiencies, the SEIS provides updated information. This includes a discussion of a recent U.S. General Accounting Office (GAO) review of the AQI program. The thrust of the GAO review is that port inspection, as a sole line of defense against the introduction of exotic plant pests, has weaknesses that are difficult to overcome. Because inspection was the sole mitigation measure prior to the wood import regulation, this is precisely the reason that the regulation was developed. The SEIS includes a general discussion of suppression and eradication control strategies that may be applied to forest plant pests. In addition, it provides information discussing that APHIS has experienced no discernible increase in the use of methyl bromide since promulgation of the wood import regulation. The SEIS concludes that two new potential treatment methods, irradiation and shipboard heat treatment, may hold promise, but are as yet unproven. The SEIS also provides information on the newly completed pest risk assessment for logs from Mexico, information on quarantine pest interceptions since the wood import regulation was implemented, and includes an appendix devoted to public comments received on the draft SEIS.

I. Introduction

A. Background

North America is rich in forest resources. Because of its abundant forest resources, the United States historically had imported relatively small quantities of logs and lumber. However, the United States has now become the world's leading importer of wood and wood products (Stairs and Salinger, 1988). In 1990, for example, the United States imported more than \$5 billion in logs, lumber, and other unmanufactured wood articles (USDA, FAS, 1992). Historically, large U.S. imports of softwood logs and lumber have been limited to those from the forests of Canada. In recent years, the quantity of softwood logs available in the United States for harvest and milling has declined, particularly in the Northwest, where Washington and Oregon alone produce about 16 percent of the total U.S. tree harvest. Commercial forest lands available for logging in the United States are projected to decrease by 4 percent between 1990 and 2040 (USDA, APHIS, 1995). Concerns over wildlife habitats, such as the spotted owl in the Northwest, are likely further to limit future U.S. tree harvest. Meanwhile, demand for timber is increasing. For example, it is estimated that demand for timber imports to the United States from the former Soviet bloc alone could be between 265 and 425 million board feet per year (USDA, FS, 1995a, and USDA, FS, 1991a). This trend of lower domestic harvest combined with higher consumer demand increases the demand for imports (USDA, APHIS, 1995). Therefore, the industry has expressed interest in importing large volumes of logs over an extended period. The focus has been on softwoods from northeastern Asia's boreal forests and plantation-grown pine from countries in the Southern Hemisphere.

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), is charged with preventing the introduction and dissemination of exotic animal and plant pests and pathogens in the United States to protect its agricultural, aquacultural, and forest resources. One way APHIS accomplishes its mission is through regulating imports, such as agricultural items and plant-related materials, that may harbor plant pests. Recent trade agreements, such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), have opened trade by removing barriers (other than phytosanitary barriers), which directly affect APHIS' inspection activities.

Because the United States historically has not imported appreciable quantities of logs and lumber (except from contiguous Canadian forests), APHIS did not have quarantine regulations in place specifically for logs, lumber, and other unmanufactured wood articles. The Organic Act (7 U.S.C. 147a), the Federal

Plant Pest Act, as amended (7 United States Code (U.S.C.) 150aa–150jj), and the Plant Quarantine Act, as amended (7 U.S.C. 151–167), provide the Secretary of Agriculture with the authority to inspect a commodity entering the United States, require treatment or refuse entry if it is found to be infested with specific pests, and to act either independently or in cooperation with States or local governments to carry out operations or measures to detect, eradicate, suppress, control, or prevent the spread of plant pests. However, inspection alone is insufficient to address the plant pest risk associated with the increase in the quantity, size, and diversity of shipments of logs, lumber, and other unmanufactured wood articles.

In early 1990, APHIS received the first requests from the wood products industry to import logs from Siberia. These requests covered the importation of several ship containers of logs in order to test import procedures and the market qualities of Siberian larch and pine. These shipments demonstrated a potential for the introduction of pest species of insects, nematodes, and plant pathogens. This experience prompted APHIS to request the U.S. Forest Service (FS) to conduct a detailed pest risk assessment of Siberian larch (USDA, FS, 1991a). The pest risk assessment estimated that the introduction of a single pest, the larch canker, could cause direct timber losses of \$129 million annually and that a worst-case scenario involving heavy establishment of exotic defoliators in the United States could cost \$58 billion. Meanwhile, APHIS analyzed the efficacy of control measures that could be used against plant pests associated with Siberian timber (USDA, APHIS, 1991a). APHIS concluded that damage could be limited by control programs, but once a pest such as a defoliator is established, eradication would be unlikely.

Because of the clear indication of potential plant pest problems, APHIS stopped the importation of logs from Siberia in September 1990. To improve on regulating the entry of these articles, APHIS also indicated its intention to promulgate a comprehensive regulation governing the importation of logs, lumber, and other unmanufactured wood articles. An advance notice of proposed rulemaking was published in the *Federal Register* on September 22, 1992 (57 FR 43628) (see fig. 1). After this, APHIS received letters of concern from Congress and citizens.

Prompted by other import requests and growing public concern, APHIS requested the U.S. Forest Service to conduct two additional pest risk assessments. The first risk assessment, for Monterey pine (*Pinus radiata*) and Douglas-fir (*Pseudotsuga menziesii*) logs from New Zealand, screened the 30-year computerized list of insects and pathogens for these two tree species and focused on seven organisms having the greatest potential risk (USDA, FS, 1992a). The second risk assessment, for Monterey pine, coigüe (*Nothofagus dombeyi*), and tepa (*Laurelia philippiana*) from Chile, similarly compiled lists

of insects and pathogens known to be associated with these tree species. Those ten insects and four pathogens posing the greatest risk potential were then identified and analyzed in detail (USDA, FS, 1993a). Both risk assessments also identified gaps in available biological information on insects or pathogens. One insect and one pathogen were identified as having high risk potential. Seven insects and two pathogens were identified as having moderate risk potential (USDA, FS, 1993a).

APHIS, utilizing these two pest risk assessments to develop mitigation measures to address the identified levels of risk and minimize the potential for plant pest introduction, published an interim regulation for the importation of Monterey pine logs from Chile and Monterey pine and Douglas-fir logs from New Zealand (58 FR 59348, November 9, 1993). The comprehensive regulation (see appendix F) promulgated by APHIS (60 FR 27665, May 25, 1995), which became effective on August 23, 1995, supersede this interim rule.

The scoping comment period for the “Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, Draft Environmental Impact Statement” (DEIS) was open for 30 days, from July 26 to August 25, 1993 (58 FR 39726). On January 20, 1994, APHIS published the accompanying proposed regulation in the *Federal Register* (59 FR 3002). The DEIS was published in February 1994 and the final EIS (EIS) was published in July 1994. The Final Economic Analysis of the proposed regulation was completed by APHIS on May 1, 1995, and the regulation was promulgated on May 25, 1995 (60 FR 27665).

On November 14, 1995, a complaint was filed in the U.S. District Court for the Northern District of California, alleging, in part, that the EIS prepared in conjunction with the regulation violates the National Environmental Policy Act (NEPA) and the Council on Environmental Quality (CEQ) NEPA implementing regulation. The Oregon Natural Resources Council (ONRC), the Pacific Environment and Resources Center, and the Northcoast Environmental Center brought this suit. On April 25, 1996, a related complaint against APHIS, also in the Northern District of California, was filed by Californians for Alternatives to Toxics and the Mendocino Environmental Center. The two complaints were consolidated. On February 27, 1997, the court ruled on plaintiffs’ and APHIS’ motions for summary judgment, finding the EIS inadequate in three areas. On June 5, 1997, the court ruled on the plaintiffs’ motions for injunctive and declaratory relief, enjoining APHIS from issuing any new permits for the importation of certain nontropical wood articles until APHIS prepares a Supplement to the EIS (SEIS) and promulgates regulations in light of the SEIS.

A Notice of Intent to prepare an SEIS was published in the *Federal Register* in August 1997 (62 FR 45217, August 26, 1997). Work was initiated on the

SEIS in July 1997; the draft SEIS was published in December 1997; and the final SEIS was available for public review in May 1998.

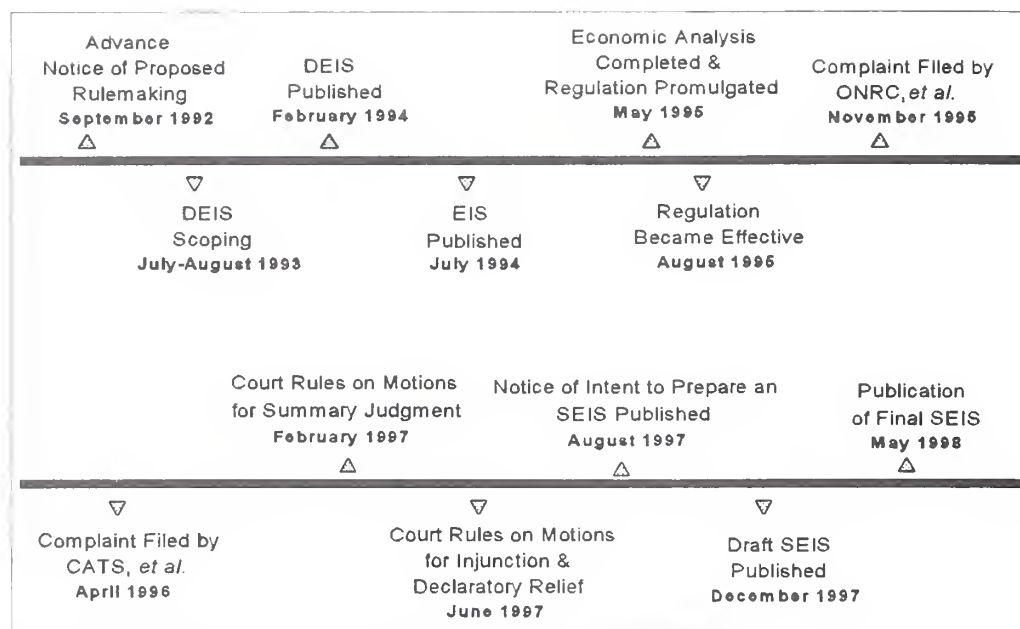


Fig. 1. Timeline for the EIS, Regulation, and SEIS.

It may appear as though the promulgation of the regulation placing restrictions and requirements on imported logs, lumber, and other unmanufactured wood articles is an impediment to free trade and, thus, might be construed as contrary to other U.S. public policy interests. However, this is not the case. The sole function of the proposed regulation is to protect U.S. natural resources from the potentially devastating effects of introduced plant pests. The regulation is structured to allow importers a degree of flexibility in their approach to the issue. This strategy results in import restrictions that obstruct trade as little as possible while still fulfilling their purpose of protecting U.S. natural resources from the risk of plant pest introductions.

B. Historical Perspective

Forest ecosystem diversity, function, and productivity have been dramatically altered by the introduction of exotic insects and pathogens. More than 20 exotic fungal pathogens and 360 exotic insects now attack woody trees and shrubs in North America (Haack and Byler, 1993). Following are examples of the consequences of exotic plant pests to our Nation's forests:

- Chestnut blight, which is caused by a fungus, was first discovered in 1904 and was probably introduced from Asia. Within 50 years, it had killed

nearly all of the chestnut trees in the United States. At the turn of the century, chestnut trees comprised a quarter of all hardwood trees in the United States and numbered in the billions (Newhouse, 1990). Despite extensive research efforts, no solution has been found to save the species, and mature American chestnut trees are no longer found in the United States.

- Dutch elm disease was introduced in North America in the 1920's from Europe. It is caused by a fungus that is spread by the European (and later American) elm bark beetle. It is now found in every State in the continental United States (USDA, FS, 1991a). Cook (1987) estimated that 100 million elm trees have succumbed to the disease.
- White pine rust fungus attacks all species of five-needle pines and other host plants, such as the currant and gooseberry. Introduced around 1900, it has spread throughout most of North America. Eastern and western white pine and sugar pine are the most valuable timber species affected by the rust. Between 80 and 95 percent of these trees have been killed or damaged in affected stands, including 9 million acres in the Northwest (USDA, FS, 1991a).
- European gypsy moths were brought into the United States in the 1860's by an entomologist. Currently, the infestation area includes much of the northeastern United States and portions of the Midwest and Canada. The gypsy moth, which feeds voraciously on new leaf growth, is considered the most destructive insect that attacks hardwood forests, shrubs, and urban shade trees. More than 12 million acres in the northeastern United States alone were defoliated in 1981, causing weakened trees, reduced growth, and aesthetic losses. Several million dollars are spent annually to monitor, suppress, and control the gypsy moth in the United States and Canada, but the European gypsy moth continues to spread (USDA, FS, 1991a).

The more aggressive Asian gypsy moth, introduced from Siberia on grain ships, was discovered in 1991 in Oregon, Washington, and British Columbia. After a \$27 million effort in 1992, the infestation was eradicated (Bridges, 1993). There also have been recent reports of Asian gypsy moths in both North Carolina and South Carolina, which were addressed in the environmental assessment for the 1995 gypsy moth eradication program in North Carolina and South Carolina (USDA, FS and APHIS, 1995b). A successful eradication program was approved and undertaken in 1995.

C. Relationship to the Environmental Impact Statement

The Council on Environmental Quality's (CEQ) implementing regulations for the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), state—

(c) Agencies:

- (1) Shall prepare supplements to either draft or final environmental impact statements if:
 - (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
 - (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
- (2) May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so. (40 Code of Federal Regulations (CFR) 1502.9)

Supplements also may be prepared to address significant concerns or data or informational gaps identified by the preparing agency or other reviewers (such as the U.S. Environmental Protection Agency (EPA) or the courts). In this case, APHIS is preparing a Supplement to the EIS because of the U.S. District Court for the Northern District of California's order regarding the need to address uncertainty and improve clarity in the following three areas:

- The efficacy of combinations of treatment methods;
- The omission of important information concerning uncertainties in risk assessments and control measures, compliance in other countries, and human health effects of pesticide applications; and
- Comparison of the alternatives.

The CEQ directs agencies to “prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council” (40 CFR 1502.9(c)(4)). The process formally began when APHIS published a Notice of Intent in the *Federal Register* on August 26, 1997, and requested comments from interested parties (62 FR 45217). This notice outlined the three areas to be addressed in the SEIS and requested comments on the proposed scope of the SEIS. The request for comments on scope is not required, but was included to demonstrate adherence to the spirit and intent of NEPA. In response to this notice, 33 comment letters were received. They were considered in the preparation of the draft SEIS. Notice of the availability of the

draft SEIS appeared in the *Federal Register* on December 10, 1997 (62 FR 65426).

Because an SEIS is prepared in the same fashion as an EIS, an SEIS is subject to a minimum of a 45-day comment period on the draft and 30 days on the final before the issuance of a Record of Decision (40 CFR 1506.10(b), (c)).

A 60-day comment period on the draft SEIS closed on February 10, 1998. Comments received were used to help complete this SEIS. In addition, the comments have been included in appendix A. APHIS intends to issue a Record of Decision at the conclusion of the 30-day period after the Notice of Availability of the SEIS is published.

D. Relationship to the Rulemaking Process

As required by section 102(2)(c) of NEPA (42 U.S.C. 4321 *et seq.*) and outlined in the CEQ regulations (40 CFR sections 1502.3, 1502.4, and 1508.18), an EIS is required on “major Federal actions” which significantly affect the quality of the human environment. Included in the category of “major Federal actions” are “new or revised agency rules [or] regulations” (40 CFR 1508.18).

Both the rulemaking and NEPA processes provide considerable opportunities for public comment. APHIS notified the public that it was considering regulating the importation of logs, lumber, and unmanufactured wood articles in an advance notice of proposed rulemaking (57 FR 43628, September 22, 1992). In accordance with the NEPA process, APHIS published in the *Federal Register* (58 FR 39726) on July 26, 1993, a combined notice of intent to prepare an EIS and scoping notice requesting comments from interested parties. Comments also were received on the proposed rule (59 FR 3002, January 20, 1994). APHIS held public hearings on February 10, 1994, in Portland, Oregon, and on February 23, 1994, in Washington, DC, to receive comments. The comments from the public hearings and the written comments received on the draft and final EIS’s were considered by APHIS. Responses to comments on the draft EIS were published in the final EIS.

As required by the CEQ regulations (40 CFR 1502.9 (c)(4) and 1506.10(c)), APHIS provided a public comment period (of 60 days, 15 days more than the minimum required) after the notification of availability of the draft SEIS. Upon completion of this SEIS, APHIS will publish a Record of Decision (ROD), as required by 40 CFR 1505.2. The ROD will state all of the alternatives considered and discuss means to avoid or minimize environmental harm from the selected alternative.

E. Summary of the Environmental Impact Statement

APHIS is responsible for preventing the introduction and dissemination of exotic plant pests and diseases in the United States, thus protecting U.S. agricultural, aquacultural, and forest resources from plant pests. As part of its mission, APHIS proposed a regulation regarding the importation of logs, lumber, and other unmanufactured wood articles. The regulation was intended to minimize the risk of plant pest introductions associated with the importation of logs, lumber, and other unmanufactured wood articles into the United States.

The need for a comprehensive regulation was prompted by the request of the wood articles industry to permit entry of larger volumes of logs into the United States from other countries. Shipments of logs from some localities provide a greater potential for introduction of plant pests than shipments from other localities.

Unfortunately, both accidental and intentional plant pest introductions have wreaked havoc on the forest and agricultural resources of the United States. Among these, chestnut blight and Dutch elm disease are recognized as two of the most devastating plant diseases to North American trees. More recently, the United States and Canada have invested millions of dollars in ongoing control and eradication efforts to stem invasions of European and Asian gypsy moths.

As required by NEPA, APHIS prepared the EIS because of the potential for impact to the environment from implementation of the proposed regulation. APHIS considered the following six alternatives in the EIS:

Alternative 1—No Action

Alternative 2—Proposed Regulation (Preferred Alternative)

Alternative 3—Prohibit Untreated Wood Except Packing Material

Alternative 4—Prohibit Untreated Wood

Alternative 5—Prohibit Unmanufactured Wood Except Packing Material

Alternative 6—Prohibit Unmanufactured Wood

The no action alternative would allow importation of logs, lumber, and other unmanufactured wood articles to continue as in the past, before the wood import regulation. Under the no action alternative, APHIS' authority was limited to inspect, require treatment, and refuse entry of any article believed to be a plant pest risk. Importers were not required to treat logs, lumber, or other unmanufactured goods. If importers treated wood articles, they had no restrictions regarding the type of pesticides that could be used, and pesticides

banned in the United States could be used to treat wood articles. Under the no action alternative, APHIS would continue to discourage importation of wood articles from Siberia, but countries could pressure APHIS to allow entry of wood articles contingent on inspection.

The remaining five alternatives considered in the EIS all restrict, to varying degrees, importation of logs, lumber, and other unmanufactured wood articles. Alternatives 2, 4, and 6 require treatment of wood articles and packing materials. These alternatives are more protective in preventing plant pest introduction than other alternatives. Alternative 6, which is the most restrictive of imports, prohibits the importation of any unmanufactured wood articles. Alternative 4 allows the importation of unmanufactured wood articles, but requires pretreatment of all imports. Alternative 2, the preferred alternative, allows importation of unmanufactured wood articles and untreated wood articles that meet certain conditions, as described below. Alternatives 3 and 5 restrict the importation of unmanufactured or untreated logs and lumber, but do not require the treatment of packing materials. Because these alternatives exempt packing materials from regulation, they are considered less protective than alternatives 2, 4, and 6.

Alternative 2, the preferred alternative, requires plant pest treatments in all cases in which APHIS has identified a risk of plant pest introduction. Of the alternatives, alternative 2 presents, what APHIS believes, is the set of actions that will best accomplish the goal of minimizing pest introduction. The regulation under alternative 2 imposes three basic requirements for the entry of regulated articles into the United States as follows:

1. A permit either must be issued by APHIS for the importation of a regulated article before to its arrival at a U.S. port, or must meet the requirements of a general permit as outlined in the wood import regulation.
2. An importer document or certificate must accompany every shipment of regulated articles verifying that the conditions of the APHIS regulation have been met. The only exceptions to this requirement are set forth in sections 319.40–2(c) and 319.40–3 of the wood import regulation.
3. At the time of arrival, all regulated articles are subject to inspection to ensure that shipments comply with requirements and plant pests of concern are not present. If upon inspection any signs of plant pests are found or if the inspector finds that the requirements for importation and entry have not been met, the inspector has the option of refusing entry of the regulated article into the United States or requiring safeguards or pest mitigation measures, such as treatment, that would minimize the risk of plant pest introductions.

Under this regulation, APHIS may issue a permit if the applicant has not had a permit revoked for noncompliance within the previous 12 months and can meet any of the following three options: (1) the importer document or certificate verifies that the requirements for a general permit are met, (2) requirements for specified articles from specified countries are met, or (3) universal importation requirements are met.

The EIS addressed the potential impacts to the environment for each of the six alternatives. These included possible risks to—

- human health,
- forest resources,
- ozone depletion from the use of methyl bromide,
- biodiversity,
- global climate change,
- cultural resources, and
- endangered and threatened species.

A detailed analysis of potential impacts from the use of methyl bromide was prepared because of the classification of methyl bromide as an ozone depletor. In addition, an economic analysis was prepared to determine the economic effects of the proposed regulation on free trade. A draft of that analysis was available for the EIS. It has since been completed and is summarized in the next section.

F. Summary of the Economic Analysis

The Final Economic Analysis of Proposed 7 CFR Part 319, Quarantine 40 Regulations (Q-40), was completed on May 1, 1995, by the Policy Analysis and Development Staff of APHIS. Because it was unavailable when the EIS was published, APHIS is including the following summary of the economic analysis.

As shown in table 1, the economic analysis estimates that, during the initial year of implementation of the wood import regulation, domestic producers of regulated articles would benefit from a welfare gain of about \$35.2 million, while domestic consumers could incur a welfare loss of about \$171.9 million. About 78.6 percent of the total estimated consumer welfare loss is attributable to treatment costs for dunnage (including scrap lumber) used to pack various nonbulk commodities imported into the United States. APHIS anticipates that this potential welfare loss will be reduced as shipping companies switch to bark-free dunnage materials to avoid Q-40 treatment costs. The net consumer loss for regulated imported wood articles occurs because additional regulatory restrictions would raise prices and decrease the availability of imported

unmanufactured wood articles. Therefore, the demand and price for less costly domestic wood would likely rise because higher import prices will encourage U.S. consumers to change their purchasing practices.

Table 1—Estimated First Year Welfare Impact on U.S. Society (in thousands of dollars)

Commodities impacted by proposed rule	U.S. consumer welfare losses	U.S. producer welfare gains	Net welfare impact
Wood articles ¹	(29,768)	29,736	(32)
Dunnage as cargo ²	(7,060)	5,460	(1,601)
Dunnage used in shipping ³	(135,122)	0	(135,122)
Estimated total impact	(171,950)	35,196	(136,754)

Note: Columns and rows may not sum due to rounding

¹ Includes logs, wood chips and particles, rough lumber, and untreated railroad ties, posts, piles, and poles.

² Includes newly manufactured wood packing boxes and cases; containers for fruit/vegetable harvests; and crates and pallets made from untreated rough lumber. These articles are produced/imported for first time use.

³ Includes all dunnage materials with bark (including scrap lumber) used as packing material for imported commodities. This estimate assumes that this rule will not affect domestic production of wood dunnage or articles that use this debarked dunnage.

Table 1 estimates that compliance with the requirements of the rule may cost U.S. society up to \$136.7 million, representing the cost of plant pest exclusion. This cost figure does not consider either the benefits that would be accrued by excluding pests or the probability that businesses would be able to reduce this cost by choosing among the rule's requirement options in ways that minimize their costs.

If the United States does not expend resources to exclude plant pests through regulation or other means, such pests could become established and cause significant damage to domestic agriculture. For example, in the past few years plant pests, including the Asian gypsy moth and pine shoot beetle, have been introduced into the United States, and several million dollars have been spent on efforts to eradicate, control, or prevent further spread to noninfested areas of the country.

A recent U.S. Forest Service pest risk assessment concerning potential Siberian timber imports evaluated the potential costs to U.S. society of several nonindigenous plant pests (USDA, FS, 1991). The risk assessment estimated that introduction of a single pest, larch canker, could cause direct timber losses of \$129 million annually. The same study estimated that a worst-case scenario involving heavy establishment of exotic defoliators in the United States could cost \$58 billion. This is a damage estimate of resources that would be lost to established defoliators. While it is possible that damage could be limited (at additional cost) by instituting an eradication program,

eradication is deemed unlikely based on the fact that no known established forest pest defoliators have ever been eradicated.

The initial estimated losses of complying with the rule's requirements will be offset over time as businesses adapt to new international sources of wood supply. If resource constraints remain constant after this rule is implemented, consumers will purchase a slightly higher volume of domestic wood articles at prices that are slightly higher than those that currently prevail in the U.S. market. However, domestic consumers will continue to supplement their wood and wood product purchases with imports whenever the imported price is lower than the domestic price.

About 98.8 percent of the total estimated losses displayed in table 1 are attributable to one-time treatment costs for dunnage (including scrap lumber) used to pack various commodities imported into the United States. APHIS anticipates that this loss will be reduced as shipping companies switch to bark-free dunnage materials to avoid Q-40 related treatment costs. Shippers will take precautions to ensure that dunnage is bark-free before commodities are loaded at the foreign port of origin. APHIS maintains that bark-free dunnage material is readily available throughout the world and can be substituted at little or no cost. Therefore, APHIS estimates that the required use of bark-free dunnage will result in a negligible long-term cost increase to shippers in the long term.

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires that APHIS specifically consider the economic impact of proposed Q-40 regulations on small entities. The Small Business Administration (SBA) data indicate that about 25,998 domestic entities could be impacted by the proposed restrictions on regulated articles. About 25,769 (99 percent) of these entities are classified as small according to SBA criteria. The estimated \$35.2 million gain in producer welfare represents less than 1 percent of combined average annual sales for impacted small entities. Therefore, the net impact of proposed Q-40 regulation on small businesses is expected to be minor.

II. Purpose and Need

The Animal and Plant Health Inspection Service (APHIS) regulates imports under the Federal Plant Pest Act, as amended (7 U.S.C. 150aa–150jj), and the Plant Quarantine Act, as amended (7 U.S.C. 151–167), which, among other things, authorize the Secretary of Agriculture to prevent the introduction and dissemination of new plant pests or those not widely distributed throughout the United States. APHIS has been delegated authority to administer these two statutes and has promulgated Foreign Quarantine Regulations (7 CFR 319) that regulate the import of commodities. Until August 23, 1995, there was no regulation specifically governing imported logs, lumber, and other unmanufactured wood articles other than an interim rule covering imports of Monterey pine logs from Chile and Monterey pine and Douglas-fir logs from New Zealand. Instead, APHIS relied upon general import procedures that provide for the inspection of imports (including logs, lumber, and unmanufactured wood articles) at the port of entry and for the imposition of quarantine measures and treatment or refusal of the shipment if plant pest species are found.

Inspection of logs, lumber, and unmanufactured wood shipments at the port of entry is labor intensive. For large shipments, examining carefully every wood article for potential plant pests is virtually impossible. Consequently, an inspection program alone is inadequate to protect against the introduction of plant pests that may be associated with large shipments of imported wood. Furthermore, the possibility of pest introduction increases if wood imports were to increase. Although there is growing interest in the importation of logs for use in U.S. mills, an actual increase in imports has not yet been fully realized. Because of the damage exotic plant pests have caused U.S. forests and other plant resources in the past and the potential for damage in the future, APHIS believed that the regulation needed to be promulgated. The August 1995 regulation was designed to address improvements needed in the existing system to prevent plant pest risks associated with increased importation of unmanufactured wood articles into the United States.

Since August 23, 1995, APHIS has had a regulation in place that specifically governs the importation of logs, lumber, and other unmanufactured wood articles. On June 5, 1997, however, the U.S. District Court for the Northern District of California enjoined the issuance of new permits for the importation of some unfinished nontropical wood articles under the 1995 regulation, pending the correction of deficiencies the court noted in the EIS and the promulgation of the regulation in light of the SEIS.

The primary purpose of this SEIS is to fulfill the 1997 ruling of the U.S. District Court for the Northern District of California (see appendix B) relative to the requirements of NEPA. This document provides the public and decisionmaker additional important information, including a better comparison of the alternatives, and responses to issues raised through the public comment process.

III. Court Orders

A. Introduction

In its February 27, 1997, order the U.S. District Court for the Northern District of California ruled on the motions for summary judgment (see appendix B). It found that the EIS prepared for the APHIS regulation governing the importation of unmanufactured wood articles did not comply, in part, with NEPA or with the CEQ regulations. This SEIS addresses the court's specific concerns regarding the inadequacy of the EIS under NEPA.

On June 5, 1997, the court ruled on the plaintiffs' motions for injunctive and declaratory relief (see appendix B). The court's analysis of the EIS did not establish that the regulation is arbitrary and capricious or contrary to law (see appendix B, p. B-36). However, the court found that the plaintiffs had demonstrated "sufficient likelihood of environmental harm to justify an injunction against the issuance of new permits for the import of non-tropical unfinished wood products" (see appendix B, p. B-38). However, the court allowed "imports to continue under permits that have already been issued" (see appendix B, p. B-39).

The court specifically enjoined APHIS from issuing any new permits for importation of unfinished, nontropical wood articles such as—

- Monterey pine logs and lumber from Chile and New Zealand,
- Douglas-fir logs and lumber from New Zealand,
- Temperate hardwoods, and
- Logs and lumber imported under the universal options.

The injunction is in effect until "APHIS prepares a new Environmental Impact Statement and promulgates regulations governing the importation of unmanufactured wood products" (see appendix B, p. B-39). The June 5, 1997, order also directed the parties to appear before the court on May 15, 1998, to "report the progress in issuing a new EIS" (see appendix B, p. B-39). The following sections explain the three specific areas of the EIS that the court found to be inadequate in its February 27, 1997, order. Chapter IV, Environmental Analysis, addresses the court's concerns in detail.

B. Point 1—Uncertainty of Efficacy of Combinations of Methods

In its February 27, 1997, order the court found that the EIS "assumes without examination that individually ineffective control measures will be effective collectively" (see appendix B, p. B-28). Although the court did not accept the

plaintiffs’ assertion that the “regulations of wood products must entirely prevent the importation of pests,” it did determine that APHIS “may not gloss over the considerable uncertainty about the effectiveness of different mitigation measures. The EIS and the regulations are based on the assumption that the combination of different mitigation measures will compensate for the inadequacies of each” (see appendix B, p. B-17).

The court appeared to agree with the plaintiffs that APHIS had failed to cite any studies or documentation for its belief that the combination of sufficient mitigation measures will successfully mitigate the introduction of pests. This documentation was deemed important since APHIS used this belief to justify its selection of its preferred alternative. The court ruled that given the purposes of the EIS are “to foster informed decision-making and promote public participation, Defendant’s [APHIS’] failure to point out the considerable uncertainty surrounding its belief that a combination of measures will be effective renders this portion of the EIS inadequate” (see appendix B, p. B-18).

C. Point 2—Omission of Important Information

The court found the EIS omits significant information concerning uncertainties expressed in the following areas:

- Risk assessments and control measures,
- Compliance by exporting countries, and
- Human health effects of control efforts.

Following is a summary of these specific concerns of the court.

1. Risk Assessments and Control Measures

The court found the adequacy of the risk assessments underlying the EIS and regulation was relevant to the adequacy of control measures. The court stated that it is “difficult for the public to assess the regulatory framework proposed in the EIS if it is not informed of the significant uncertainty about the scope of the risk that the regulations seek to contain” (see appendix B, p. B-20). The court cited some of APHIS’ studies, which called for “additional research to fill in significant gaps in knowledge about the efficacy of various control measures” (see appendix B, p. B-20).

The court found that the “failure of the EIS to discuss in a significant manner the uncertainties about the risks of infestation and the adequacy of control measures skews its portrayal of the risks associated with the preferred alternative. This skewed portrayal limits the usefulness of the EIS to public participation and informed decision-making” (see appendix B, p. B-20).

- 2. Compliance by Exporting Countries** The court stated that “[t]o a great extent, the preferred alternative depends upon self-certification by importers or upon certification by the national governments of exporters” and that APHIS “may not dismiss compliance problems as a simple problem of human honesty lying beyond the scope of the EIS” (see appendix B, p. B-20). The court ruled that APHIS’ response in the final EIS to comments about this issue “does not constitute an adequate evaluation of how compliance problems abroad may limit the effectiveness of the preferred alternative” (see appendix B, p. B-21).
- 3. Human Health Effects of Control Efforts** The court agreed with APHIS that “detailed discussion of the human health consequences of eradication efforts can only be conducted in the context of a particular eradication effort” (see appendix B, pp. B-21–B-22). However, the court faulted APHIS for not discussing “the health implications of eradication efforts at all” (see appendix B, p. B-22). The court called for a discussion of the range of human health consequences of pesticide applications comparable to the discussion in the EIS of the range of environmental consequences that can accompany application of pesticides to forests. The court found that this omission “minimizes the potential consequences of looser import restrictions [and] biases the EIS in favor of the preferred alternative” (see appendix B, p. B-22).

D. Point 3—Comparison of the Alternatives

The court, in its decision, twice quoted a section of the CEQ regulations to emphasize the importance of a clear comparison of alternatives—

- The EIS “should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public” (40 CFR 1502.14) (see appendix B, p. B-27); and
- The comparison of the environmental effects of the various alternatives is supposed to be “the heart of the environmental impact statement” (40 CFR 1502.14) (see appendix B, p. B-28).

The court found that the EIS failed to discuss adequately “the different environmental impacts of the various alternatives” (see appendix B, p. B-28). The court pointed out that differences exist in the—

- (1) extent to which alternatives rely on the use of methyl bromide,
- (2) use of different treatments for different kinds of wood from various parts of the world, and
- (3) effectiveness of different treatment methods against different kinds of threats (see appendix B, pp. B-27–B-28).

The court found that “[r]ather than sharply defining the issues and providing a clear basis for choice among the alternatives, the EIS obscures the differences by labeling them all a matter of degree. By downplaying these differences, the EIS minimizes both the environmental drawbacks of the more lenient alternatives and the environmental benefits of some of the stricter alternatives. This distortion impedes both public participation and agency decision-making. The comparison of the environmental impacts of the various alternatives is therefore inadequate” (see appendix B, p. B-28).

The following chapter, Environmental Analysis, addresses the three primary concerns of the court: (1) the efficacy of combinations of methods; (2) the important additional information concerning the risk assessment and control measures, the compliance in other countries, and the human health effects of control measures; and (3) the comparison of the alternatives.

IV. Environmental Analysis

A. Point 1—Efficacy of Combinations of Methods

1. Introduction

The importation of logs, lumber, and other unmanufactured wood articles presents a risk of inadvertently importing plant pests that may be associated with the imported commodity. Wood and wood articles are subject to infestation by insects, fungi, nematodes, and other plant pests at any time from preharvest through final manufacturing. Measures can be taken to reduce the probability of pest infestation to a negligible level and, thus, maintain the value of the wood product. For example, wood can be grown in plantations where silvicultural techniques and pesticides can be used to increase harvest and reduce pest infestation.

Upon harvest, there are many treatments and handling procedures that can be used alone or in combination to rid wood of pests and prevent reinfestation of the wood. Such treatments can include debarking logs to remove surface pests, using pesticides to kill surface pests or wood-boring pests as they emerge, fumigating the logs with a chemical to kill surface and shallow wood pests, and using heat to kill pests on and in the wood. Handling procedures include segregating logs from potential sources of pests and shipping them within a short time of harvest and treatment in order to avoid infestation or reinfestation. Also, by limiting exports to saw quality logs only (that is, logs with no discernible pests associated with them), the probability of having an infested log to begin with is greatly reduced.

Each treatment and procedure has its limitations—it may negatively affect certain qualities or the value of the wood, it may not be totally effective against all pests, it may be economically infeasible, or the technology may not exist to apply the treatment practically. Heat treatment (either to raise and maintain the internal temperature of the wood to 71.1 °C for a minimum of 75 minutes or to kiln dry in accordance with the Dry Kiln Operators Manual (USDA, FS, 1991c) is the only treatment acknowledged to be effective against all pests (USDA, APHIS, 1991a and USDA, FS, FPM, 1992b). Even after this treatment is applied, the wood must be segregated from all potential sources of pests to ensure that it is not reinfested. Choosing a set of procedures and treatments that maximize the likelihood of successful exclusion of plant pests is a difficult and complicated decision because it must be effective, practical, and economically feasible.

Until recently, the procedure for excluding plant pests associated with imported logs, lumber, and wood articles consisted of inspection at the port of entry by Plant Protection and Quarantine (PPQ) inspectors. The disposition of the commodity was determined by the inspection results. The inspection process

included verifying the paperwork on the commodity and visually and physically checking the commodity at the port of first arrival for signs of pest infestations. Visual and physical inspection generally required the opening of shipping containers or holds to look for signs of pest infestations. This included looking for signs of bore holes and rot, checking bark that may be present, taking samples, and carrying out any other actions that the inspector deemed as appropriate to confirm the presence or absence of plant pests. Disposition of the commodity included one of four options—

- (1) if no plant pests were found, the commodity was permitted entry;
- (2) if plant pests were found, the inspector required treatment as deemed appropriate to eliminate the pest and then the commodity was permitted entry;
- (3) if the risk of pest introduction could not be mitigated, the inspector refused entry of the wood commodity into the country; or
- (4) if the risk of pest introduction could not be mitigated, the inspector could have the infested articles destroyed onsite.

Historically, the inspection process was considered by most plant pest experts in USDA to be sufficient to minimize plant pests that may have been associated with wood imports. Besides manufactured articles and the Canadian imports, most wood was imported in small shipments. These shipments were primarily tropical hardwoods or lots of specialty woods that posed little threat of pest introduction. The small shipments made it relatively easy to conduct thorough inspections either to confirm or to deny with confidence the presence of plant pests so that the inspectors could take appropriate action.

2. Potential Future Imports

As mentioned in chapter 1, the U.S. forest products industry has expressed an interest in increasing the amount of logs, lumber, and other unmanufactured wood articles that are imported into the United States. The source of such imports could be from anywhere, but specific interest has been expressed in importing large quantities of larch wood from Siberia, Monterey pine (also known as radiata pine) from Chile, and Monterey pine and Douglas-fir from New Zealand. Exporters from Russia and, especially, Chile and New Zealand are anxious to expand their export markets into the United States. Both Chile and New Zealand have large plantations of Monterey pine, and New Zealand also has large plantings of Douglas-fir that are maturing and ready for harvest. In Russia, the trees available for export are from natural forests rather than plantations.

Importation of large quantities of logs, lumber, and other wood articles from trading partners other than Canada would be a major departure from historical import patterns. The magnitude of large individual shipments of logs presents the port inspector with a much more difficult task. In the past, the inspector would have to inspect small shipments of logs or wood articles that could be moved relatively easily and closely observed. Even if the shipment consisted of

up to 15 or 20 large logs, a comprehensive inspection was possible. The new scenario of potentially large shipments could include individual shipments of hundreds of logs and even shipholds full of logs. The inspector is presented with a formidable task when conducting a physical inspection on a large shipment. No longer does the inspector have relatively easy access to all logs in a shipment. Now the inspector must coordinate the inspection with the heavy equipment operators who are moving and unloading the logs. The time an inspector can spend looking at individual logs will be reduced because of the sheer volume of logs that must be inspected and because logistical problems become much more of an issue. Confidence that the inspection process by itself will be able to either confirm or deny the presence of plant pests is reduced, thus requiring that additional safeguards be implemented. Therefore, APHIS began to study the situation with the purpose of ultimately defining a set of mitigation requirements that would reduce the risk associated with plant pest introductions to a negligible level, without depending solely on the efficacy of inspections of large shipments of logs, lumber, and other wood articles.

3. Risk Assessments and Combinations of Methods

In systematically approaching the problem of developing effective mitigation measures, APHIS arranged for the U.S. Forest Service to—

- conduct pest risk assessments to identify potential pests on imported logs;
- estimate their likelihood of establishing self-sustaining, reproductive populations; and
- estimate the consequences of their establishment in the United States.

The U.S. Forest Service conducted such pest risk assessments for larch logs from Siberia and the Soviet Far East (USDA, FS, 1991a), Monterey pine and Douglas-fir from New Zealand (USDA, FS, 1992a), and Monterey pine, coigüe, and tepa from Chile (USDA, FS, 1993a). To conduct each pest risk assessment, the U.S. Forest Service established a team of forest pest specialists. Team members and those advising the team by providing technical information and additional expertise to the team included USDA employees, as well as individuals from academia, private industry, and other government organizations. The team also traveled to the country where it was evaluating pest risk to confer with experts in the country and to verify pest conditions through site visits.

In the pest risk assessments conducted, determining the risk posed by pests that might be associated with the importation of wood consisted of two tasks: (1) determining the likelihood that exotic pests could become established in the United States and (2) determining the consequences of any such establishment. Each task was then subdivided into components, and each component was addressed.

Four components were evaluated under the first task (to determine the likelihood of an exotic pest becoming established)—

- (1) the likelihood of a pest organism being on, with, or in the logs at the time of importation;
- (2) the likelihood of pests surviving in transit and not being detected at the port of entry under then-current quarantine procedures (inspection only);
- (3) the likelihood of pests encountering environmental conditions in which they could survive and reproduce; and
- (4) the likelihood of a pest expanding its range beyond the colonized area.

The components of the second task (the consequences of establishment) include—

- (1) the economic impact of pest establishment;
- (2) the environmental impact of pest establishment; and
- (3) the social and political influences that could be associated with pest establishment.¹

Every component of the pest risk assessment process contains varying degrees of uncertainty because of gaps in the available information. The process, however, includes the extensive use of subject matter experts and, thus, makes every attempt to overcome gaps in scientific information by seeking and using the best professional judgment of experts.

Concurrent with the efforts of the team of experts assembled for the U.S. Forest Service-led pest risk assessment for Siberia and the Soviet Far East, APHIS assigned its Methods Development Center in Hoboken, New Jersey, with the task of providing an inventory and analysis of mitigation methods available to be used in developing an import regulation for logs, lumber, and other unmanufactured wood articles (USDA, APHIS, 1991a). The methods identified in the inventory were evaluated for technical efficacy against the organisms found in the pest risk assessment for Siberia and the Soviet Far East (USDA, FS, 1991a). The results of this analysis were used to help define the requirements for the safe import of Russian timber.

The analysis noted that seldom were literature citations available that provided scientific evidence that a particular mitigation method was effective against a

¹ The social and political impacts were not included in the pest risk assessment for Siberian larch (USDA, FS, 1991a), but since have been included as a standard portion of the pest risk assessment process. Thus, they were included in the pest risk assessments for New Zealand (USDA, FS, 1992a) and Chile (USDA, FS, 1993a).

specific pest identified as a potential problem. This is not surprising because worldwide there are literally thousands of potential pest species and it is unreasonable to expect that scientific studies would be conducted on all of them. To obtain such information at this time would entail exorbitant costs in both time and money.

Nevertheless, this lack of scientific data results in uncertainty. The degree of Uncertainty, however, can be reduced to a negligible level if the preponderance of evidence indicates that a measure would be effective against similar organisms or has demonstrated effectiveness over a wide variety of organisms. When APHIS experts found that this was the case, the measure was determined to be effective. APHIS then monitors the mitigation methods to ensure they work as expected.

Often, the lack of species-specific data in the literature requires the extrapolation of existing data to similar species. Assessments of the efficacy of methods were done according to the site locations that may be occupied by pests, as described by the U.S. Forest Service risk assessment team, i.e., efficacy against pests on the outer surface of the log, pests in or under the bark, and pests in the wood. The results of the analysis are summarized in table 4–1.

Table 4–1. Efficacy of Mitigation Measures Available for Pests and Pathogens Associated With Russian Timber Imported to the United States¹

Pest/Location	Methyl bromide	Kiln drying	Steam heat	Irradiation	Debarking
Pests on the outer surface					
Asian gypsy moth/hun moth	E	E	E	R	E
Root/stump insects	E	E	E	E	E
Scale insects	E	E	E	R	E
Flat bugs	E	E	E	R	E
Aphids/wooly adelgids/ Siberian silk moth	E	E	E	R	E
Pathogens	R	E	E	R	E
Pests in or under bark					
Engraver beetles/weevils	E	E	E	R	E
Pests in the wood					
<i>Monochamus</i> , <i>Xylotrechus</i>	E	E	E	N	N
Siricidae	E	E	E	N	N
Pathogens	R	E	E	N	N
Wood nematodes	R	E	E	N	N

Legend: E = Effective, N = Not effective, R = Requires research

¹ Source: Abstracted from USDA, APHIS, 1991a.

A similar process to that described for Siberian logs was followed for imported logs from both New Zealand (Orr, 1992) and Chile (Reeves, 1993). That is, organisms that demonstrated the potential for risk in the pest risk assessment were matched with potential mitigation measures that would be effective in developing a safe importation scheme. The three mitigation assessments (USDA, FS, 1991a; Orr, 1992; Reeves, 1993) represent the most current and comprehensive review of the scientific information that is available for forest pests from the respective countries. Those assessments acknowledge that, while the information they contain is believed to be as accurate as possible, gaps in scientific information remain for some organisms known to be, or could potentially become, forest pests. The mitigation measures that resulted from the information in those assessments are believed to be effective against not only pests that were the actual subject of scientific experimentation, but pests similar in biology and habitat preferences to those tested.

Because the consequences of introducing a pest or pathogen can be severe, APHIS was cautious in developing the mitigation requirements. Several examples of the deleterious effects that pest or pathogen introductions can have on the forest resources in the United States are provided in the EIS. It is because of experiences with pests, such as the gypsy moth, that APHIS has exercised caution regarding imports proportional to the risk that they pose. In general, when there is a higher level of risk, APHIS adopts more stringent entry requirements for import commodities.

The adopted regulation has several requirements that must be met if importing Monterey pine logs from Chile or New Zealand or Douglas-fir logs from New Zealand. The requirements are divided into two stages—

- (1) requirements to be met prior to entry into the United States, and
- (2) requirements to be met after entry into the United States.

The requirements are summarized in table 4–2.

Table 4–2. Regulatory Requirements for Imported Logs From Chile or New Zealand

Requirements	Level of pest risk reduction ¹
Before shipment for U.S. entry:	
1.a. Provide heat treatment of logs. (Steps 2 and 3 are not required if this step is taken; move directly to step 4.)	Total
- OR -	
1.b. Acquire saw log quality trees.	Some or extensive ²
- AND -	
2. Debark logs within 45 days of timbering.	Some or extensive
3. Fumigate logs after debarking and before 45 days.	Extensive or total
4. Segregate logs from all other pest sources.	Extensive or total
Upon U.S. entry:	
5. Conduct comprehensive inspection of logs.	Some
6. Move logs directly to processing facility, maintaining the segregation from pest sources (initiated in requirement 4, above); heat treat and process logs, and destroy any waste within 60 days of entry.	Total

¹ Some = Some reduction of pest risk expected; Extensive = Extensive reduction (95 percent or more) of pest risk expected; and Total = Total (100 percent or nearly 100 percent) reduction of pest risk expected.

² Dependent upon any identified pest

Before entering the United States, the first requirement is that the wood either must be heat treated or be from saw log quality trees (live, healthy, and apparently free from disease and pests). At the very outset of the importation process, this requirement provides some or extensive pest risk reduction, depending upon the identified pest (see tables 4–3 and 4–4). In other words, by requiring trees that are apparently pest- and disease-free, APHIS has reduced the risk of previously unnoticed pests appearing in the shipments later in the process. The next requirement is that within 45 days, the logs must be debarked (resulting in some or extensive reduction in pest risk against bark beetles, for example) and then fumigated either on board in the ship’s hold or in sealed containers (extensive risk reduction or total reduction against hitchhikers, for example). After fumigation, logs must be segregated from all other pest sources until they have entered the United States and are processed. The segregation of treated logs protects against reinfestation by pests.

Table 4-3. Raw Logs—Pathogens and Pests vs. Mitigation¹

New Zealand					United States	
Pest	45-day limit	Saw log quality only	Debarking	Methyl bromide fumigation	PPQ entry requirements	Heat process (sawmill)
Bark beetles	S	S	E	T	S	T
<i>Platypus</i> spp.	S	S	S	T	S	T
<i>Sirex</i> /fungus	S	E	S	E	S	T
<i>Leptographium</i>	S	E	S	E	S	T
Kaloterms	S	E	S	T	S	T
Huhu beetles	S	E	S	E	S	T
Hitchhikers	S	S	E	T	S	T
Unknown pests	S	S	S	E	S	T

Legend: S = Some reduction of pest risk expected. E = Extensive reduction (95 percent or more) of pest risk expected. T = Total (100 percent or nearly 100 percent) reduction of pest risk expected.

¹ Source: Orr, 1992

Table 4-4. Raw Logs—Pathogens and Pest vs. Mitigation¹

Chile					United States	
Pest	45-day limit	Saw log quality only	Debarking	Methyl bromide fumigation	PPQ entry requirements	Heat process sawmill
Bark insects	S	S	E	T	S	T
Siricid wasp	S	E	S	T	S	T
Wood-boring insects	S	E	S	T	S	T
Hitchhikers	S	N/A	E	T	S	T
Termites	E	E	S	T	S	T
<i>Diplodia</i> shoot blight	N/A	S	S	E	S	T
Needle diseases	N/A	S	E	E	S	T
Stains & vascular wilt	S	S	S	E	N/A	T
Root & stem rot	N/A	E	S	E	N/A	T

Legend: S = Some reduction of pest risk expected. E = Extensive reduction (95 percent or more) of pest risk expected. N/A = Not applicable. T = Total (100 percent or nearly 100 percent) reduction of pest risk expected.

¹ Source: Reeves, 1993.

Upon entering the United States, the logs are subject to inspection and then must move directly to a processing facility where they must be heat treated and processed. Any waste from the processing of logs must be destroyed within 60 days of entry. The heat treatment process results in total reduction of pest risk. The requirement that logs be segregated from pest sources is maintained until final processing of the logs is complete.

Tables 4–3 and 4–4 demonstrate that the combination of requirements imposed before a shipment of logs from New Zealand or Chile enters the United States will result in a range of extensive to total reduction of the risk that a live exotic pest will remain with the imported logs. By the time all steps are completed (including those to be accomplished in the United States), although some uncertainty remains, the probability of a live pest being present, escaping, and establishing a reproducing population in the United States is negligible because of the complementary mitigation measures and the sequence in which they are applied.

The requirements for a universal import permit also include combinations of treatments and/or handling procedures, as identified in table 4–5. The treatments all result in a negligible risk of pest introduction and establishment, and the handling procedures ensure that infestation or reinfestation does not occur after the commodity has been treated. In addition, raw lumber and wood or bark chips from places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer are ineligible for importation. This is because logs, lumber, and other wood articles from this area have been found to be severely infested with numerous pests and reinfestation is highly likely to occur.

Table 4–5. Universal Permit Regulatory Requirements for Wood Imports

Commodity	Requirement	Level of pest risk reduction
Logs	1. Prior to importation, logs must be debarked.	Some or extensive
	2. Prior to importation, logs must be heat treated.	Total
	3. During entire interval between treatment and export, logs must be handled and stored to exclude pest access to logs.	Extensive or total
Lumber (heat treated or heat treated with moisture reduction)	1. Heat treat prior to import.	Total
	2. During shipping, lumber must be segregated from other regulated articles.	Extensive or total

Table 4–5—continued

Table 4–5—continued

Commodity	Requirement	Level of pest risk reduction
Lumber (raw)	1. Lumber must be segregated from other regulated articles.	Extensive or total
	2. Lumber must be heat treated within 30 days of import and prior to processing.	Total
Wood chips/bark chips	1. Prior to import, wood chips and bark chips must be fumigated, OR heat treated.	Extensive or total Total
	2. Wood chips and bark chips must be segregated.	Extensive or total

Legend:

Some = Some reduction of pest risk expected

Extensive = Extensive reduction (95 percent or more) of pest risk expected

Total = Total (100 percent or nearly 100 percent) reduction of pest risk expected

APHIS recognizes that uncertainties are inherent when dealing with biological resources. In the face of this uncertainty, APHIS must, and does, make biological decisions based on the best available scientific data while attempting to reduce uncertainty by continually reviewing new information and evaluating the efficacy of new mitigation measures. The wood import regulation will be adjusted to include new or improved methods and strategies for pest exclusion as they become available.

B. Point 2—Important Additional Information

1. Risk Assessment and Control Measures

a. Introduction

Many forest pests that occur in other countries do not occur in the United States. APHIS is charged with preventing the introduction and dissemination of exotic plant pests, thereby protecting U.S. agricultural and forest resources. In order to protect these resources effectively, it is necessary for APHIS to regulate imports that may harbor pests.

APHIS relies on the best available scientific information when developing both regulations and pest exclusion methods. This information comes from many sources, including published information in the scientific literature and the opinion of recognized forest pest experts. Risk assessment is one of the approaches used to summarize the existing knowledge and predict the potential for pests to enter and become established in the United States.

Risk assessments systematically identify and characterize the risk associated with the occurrence of an adverse event. As part of this process, risk assessments use

existing information. Risk assessments were conducted by the U.S. Forest Service on the importation of logs from Siberia (USDA, FS, 1991a), New Zealand (USDA, FS, 1992a), and Chile (USDA, FS, 1993a). In developing the regulation governing the importation of logs, lumber, and other unmanufactured wood articles, APHIS relied upon those risk assessments and evaluations of available control measures for forest pests from Siberia (USDA, APHIS, 1991a), New Zealand (Orr, 1992), and Chile (Reeves, 1993).

Equally important as summarizing existing knowledge, risk assessments identify information gaps and capture and record uncertainty. Identifying uncertainties associated with any investigation helps define the degree of confidence that accompanies decisions based upon the risk assessment. Uncertainty is a fundamental part of scientific investigation often with more questions being raised by a scientific study than are answered. Because scientific research is based upon probabilities rather than absolutes, uncertainties are inherent to any investigation (Silbergeld, 1991).

Throughout the risk assessments (USDA, FS, 1991a, 1992a, and 1993a), as well as the review of control measures for potential pests (USDA, APHIS, 1991a; Orr, 1992; Reeves, 1993), are numerous statements concerning uncertainties and the paucity of information on many potential pests. The EIS (USDA, APHIS, 1994) relied upon the results of the risk assessments, especially information on known forest pests. Less implicit in the EIS was a summary about the uncertainties and data gaps expressed in the risk assessments and the review of the control measures. This section further explains uncertainties regarding the risks of infestation and the adequacy of control measures.

b. Uncertainties Regarding Pests

Many nonindigenous organisms have the potential to cause damage to U.S. forest resources. The pest risk assessments (USDA, FS, 1991a, 1992a, 1993a) emphasized the known forest pests that occur—or suspected to occur—in the exporting countries. Assessment of the threat that those pests pose to forest resources in the United States was based on the biological information available for each pest. A greater degree of confidence can be given to predicting the likelihood and consequences of establishment for familiar and well-known pests. The pests that can most readily be assessed for their potential to become established in the United States are frequently those pests that have the most information known about them. Knowledge regarding life cycles, interactions with other organisms, and habitat requirements are examples of the kind of information used for assessing whether or not a given organism could become a forest pest in the United States.

Often, an assessment of pest potential is based on incomplete information. The ability of some pests to damage forest resources may be well documented, but biological information may be lacking. For those organisms, information obtained on similar species can be used to infer the pest potential. If a species has a history of being a forest pest outside the United States, it can be assumed that the species also would be a pest should it be introduced and become established in the United States.

Examples of potential forest pathogens for which there is a high degree of uncertainty due to a lack of information are the various species and strains of the fungal genus *Ophiostoma*. These fungi have been included as potential pathogenic pests on imported logs from New Zealand (USDA, FS, 1992a) and Chile (USDA, FS, 1993a), but there is uncertainty about whether these exotic organisms would be pathogenic if introduced into North America. It is suspected that the vectors for these fungi in Chile are bark beetles and possibly other insects found in beetle galleries (Harrington, 1988), yet the exact vectors have not been proved (Cielsa, 1988). While the exact fungal vectors are not known, the risk assessment assigns a high probability of establishment for these fungi in the United States. This example shows that the lack of information on a given insect or microorganism and how it could become established does not mean that these pests will be designated as low risk. In fact, lack of knowledge and a less cautious approach may increase the possibility of introducing an unknown virulent pathogen that could become successfully established in the United States and cause unacceptable losses (USDA, FS, 1993a).

Other organisms, such as bark beetles (order Coleoptera, family Scolytidae), are known to cause damage to forest resources, but little else may be known about them. Many bark beetles in Asia have yet to be described and classified, and little is known about the life histories and survival requirements for some of these destructive forest pests. Therefore, risk assessments associated with Asian bark beetles must necessarily be made with a high degree of uncertainty.

The most difficult organisms to assess for pest potential are those that are not known to be pests in their native habitats, but may become pests if introduced and established in the United States. Because of different ecological relationships in new environments, an introduced species may not behave in the same way as it did in its native habitat. Some pests cause minor damage in their native habitats, but cause devastating effects when introduced outside their native range. Two examples of pest species invading North America include two fungi that have virtually eliminated the American chestnut and drastically reduced the American elm.

The fungus, *Cryphonectria parasitica*, causes chestnut blight. This fungus causes little damage to chestnuts in Asia. However, 50 years after being

introduced into the eastern United States, the fungus had devastated what was once the dominant tree in eastern North America, the American chestnut. Despite extensive research, no solution has been found that would allow the recovery of chestnuts in North America.

Another fungus, *Ophiostoma ulmi*, is responsible for the drastic reduction in American elm trees and five other elm species that are native to States east of the Great Plains. Native to Europe, this fungus is spread by the European elm bark beetle. Since it was introduced in the United States in the 1920's, native American bark beetles also have become carriers of the fungus. *O. ulmi* infestations have spread through the United States and are now found in all 48 contiguous States. Further complicating attempts to combat this pest was a change in *O. ulmi* virulence once it entered the United States. This indicates the complex and unforeseen aspects that can be associated with predicting the risk posed by a given organism.

Distinctive life history traits also may influence the damage caused by a forest pest. Unforeseen changes in those traits complicate any prediction of how much damage a pest can cause. An example is the gypsy moth (*Lymantra dispar*) invasion into the United States. It is believed that the Asian gypsy moth strain poses a greater threat than the European strain because, unlike the European strain female, Asian strain females can fly. This may very well increase the rate at which Asian gypsy moths can spread to forest resources in the United States. In its native range, the Asian strain has a wider plant host range than the European strain. It could be that the Asian strain will also have a wider plant host range than the European strain in the United States.

The pest risk assessments conducted for Siberia, Chile, and New Zealand attempted to systematically identify organisms that could potentially become forest pests in the United States. Taken into account was the considerable amount of uncertainty surrounding each organism. For many potential pests, biological information is lacking that would help determine the probability and consequences of establishment. Assessing the risk potential that a given organism could become a forest pest in the United States is then based on known facts, as inferences from the best available information, and on the best professional judgment of recognized experts.

c. Uncertainties Regarding Control Method Efficacy

Many methods have been developed to eliminate pests from wood. The only treatments acknowledged as effective against all pests are (1) the standard kiln drying schedules for lumber used in the United States (this has not been confirmed for use on logs (USDA, APHIS, 1991a)) and (2) raising and maintaining the internal temperature of all wood articles to at least 71.1 °C for a

minimum of 75 minutes (USDA, FS, FPM, 1992b). Other treatment methods such as debarking, spraying pesticides, and fumigation are effective against certain pests, but are of limited effectiveness against others.

Testing a particular control method for effectiveness against every known or potential pest organism would not be feasible or necessary. Control methods have often first been tested, under controlled conditions, for efficacy against specific pests as well as a wide variety of other organisms. Once it has been accepted that a method is effective against a certain group of pest organisms, those results are widely considered to be applicable against species with similar biologies and habitat requirements.

Heat treatment is an example of how a control method is developed and leads to broader application. The early use of heat to treat wood for pests was reported by Snyder (1923), and Snyder and St. George (1924), who found that a kiln-drying schedule was effective against powderpost beetles (*Lyctus* spp., family Lyctidae) in lumber. Since then, Ostaff and Cech (1978) have demonstrated that kiln drying effectively controls larvae of the pine sawyer beetle (*Monochamus* spp., family Cerambycidae), a beetle that penetrates wood deeper than powderpost beetles. Based on results of limited tests such as these, Ostaff and Shields (1978) broadly concluded that commercial kiln drying would be effective in killing all stages of insect life in wood. Most recently, after reviewing available information, it was determined that heat treatment at 71.1 °C for 75 minutes would effectively eliminate pests from all wood articles (USDA, FS, FPM, 1992b).

New control methods are also being developed and tested for effectiveness against a variety of pests. An alternative to kiln drying heat treatment is to treat wood with microwaves, which are ultrahigh frequency waves that elevate the temperature of any material containing moisture. In wood with a low moisture content, resident insects would have a higher moisture content than the surrounding wood and be more susceptible to microwaves. Thomas and White (1959), Hightower *et al.* (1974), and Burdette (1976) have all reported on various insects that could be controlled by using microwaves to sterilize wood. However, there is uncertainty whether microwaves have a significant effect on eliminating fungi from wood (USDA, APHIS, 1991a). Thus, while proven to be effective against certain pests, the limitations of this method are still being investigated.

Because methods are not tested against every pest, there are gaps in scientific data on the efficacy of various mitigation techniques (USDA, APHIS, 1991a). To estimate method efficacy, it is necessary to extrapolate existing data to related species. To obtain information on the efficacy of every method against every potential pest would entail exorbitant costs in both time and money. Decisions

regarding treatment methods are based on the professional judgment of recognized experts using the best available scientific information. Reliance upon professional judgment is generally recognized as the preferred method to overcome data gaps when it is not possible to obtain the missing data.

As forest pest risks and potential mitigative measures are considered, the lack of data in both areas is taken into account (USDA, APHIS, 1991a). The ability to develop strategies to manage, control, or even eradicate those pests becomes more likely as data gaps are filled and knowledge regarding forest pests increases. Generally, when there is a high level of risk, APHIS adopts more stringent entry requirements for commodities.

d. Summary

Our knowledge of forest pests and the effectiveness of pest control methods used to control pest movement contains data gaps. Some organisms that are known to be forest pests have been investigated to a great extent while much less is known about the biology of others. In addition, some organisms that are not pests in their native habitats may become pests if they are introduced and become established in the United States.

In addition, no combination of methods or single method has been tested for effectiveness against all known or potential pests. Because of these uncertainties, developing a definitive list of potential pests and determining the absolute efficacy of pest exclusion methods is impossible. Yet, it is valid to rely upon professional judgment to identify pest organisms and to assume that once a given method effectively controls a given organism, that similar organisms would also be susceptible to that method. The regulation for importing nursery stock, plants, roots, and bulbs in growing media (7 CFR 319.37–0) is an example of an overlapping combination of pest control methods considered effective against known potential pests.

2. Compliance by Exporting Countries

a. Introduction

APHIS is the Federal agency responsible for minimizing the risks of plant pest and pathogen introduction and thereby protecting U.S. agriculture and forests. Under the authority of the Federal Plant Pest Act, the Plant Quarantine Act, and the Federal Noxious Weed Act, APHIS regulates the importation of plants and plant products to prevent the introduction and spread of plant pests that are new to or not widely distributed within the United States. The regulations, contained in the Code of Federal Regulations, Title 7, chapter III, are critical to the agency's mission to protect U.S. agriculture. APHIS accomplishes its mission through inspection of cargo and passengers; prevention, monitoring, and control

programs; cooperative efforts at the international, Federal, State, and local levels; scientific research; and education.

The rapid growth in international trade and travel and the reduction of unwarranted trade restrictions in recent years, coupled with the vast geographic areas covered, have resulted in a proportionate expansion of APHIS' responsibilities. For example, overall exports and imports rose nearly 50 percent and agricultural exports and imports by nearly 30 percent between 1990 and 1995 (GAO, 1997). To meet the challenges presented by such growth, APHIS has increased its number of inspectors by 44 percent, from about 1,800 in 1990 to about 2,600 in 1996 (GAO, 1997).

APHIS' Plant Protection and Quarantine (PPQ) unit has the regulatory authority to inspect both agricultural and nonagricultural products that may carry plant pests. This is done primarily through its Agricultural Quarantine Inspection (AQI) activities. In fiscal year 1996, APHIS spent an estimated \$152 million on AQI activities.

Recent multilateral trade agreements, such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), have provisions that have opened trade by dismantling artificial trade barriers, and directly affected APHIS' inspection activities. For example, both agreements contain provisions on the use of sanitary and phytosanitary (related to animal and plant health) measures to limit the introduction of foreign plant pests and pathogens. Consequently, APHIS is developing science-based pest-risk standards to comply with the agreements. APHIS also is actively involved in developing international pest-risk standards to comply with GATT and NAFTA. These standards form the foundation for changing inspection program procedures, including the frequency and intensity of inspections. These standards will help determine a level of protection appropriate to the risk and will not unnecessarily restrict trade.

b. United States Programs

APHIS' approximately 2,600 inspectors with a budget of about \$152 million work cooperatively with three other Federal Inspection Services (FIS) agencies—the U.S. Department of Justice's Immigration and Naturalization Service (INS), the U.S. Treasury Department's Customs Service (Customs), and the U.S. Department of the Interior's Fish and Wildlife Service (FWS)—to monitor the entry of cargo and passengers into 172 land and sea ports. Besides cargo inspections, APHIS' AQI inspectors also are involved in, but not limited to, the review and issuance of certificates for agricultural exports; temporary work assignments away from their normal work location (for more efficient allocation of inspectors on an as needed basis); inspection and approval of

treatment facilities; cargo fumigation; anti-smuggling activities; investigations, monitoring, and preclearance activities; and training.

Because of recent trade agreements and the importance of trade to the U.S. economy, APHIS and its inspectors are working to facilitate the flow of cargo and people into the United States while protecting U.S. public health, agricultural, and biological interests. To help meet its increasing regulatory responsibilities without needless disruption of trade, APHIS has taken the following actions:

- **Shifting staff and funds away from other programs to the inspection program.** While the budget for inspections activities rose by 78 percent and staffing by 44 percent, APHIS' overall funding has increased by only 20 percent since 1990.
- **Broadening the range of inspection techniques to more efficiently use its inspection resources.** APHIS is increasing the use of detector dogs and x-ray equipment. APHIS is funding research on new x-ray technologies and studying improved sampling techniques and the use of roving inspectors at land borders. Inspectors also are using periodic inspection blitzes—highly intensive inspections of baggage or cargo—in addition to their usual inspections of selected items. For example, if imports arrive from a country where quarantine pests have been detected on cargo in the past, APHIS may conduct inspections on 100 percent of the cargo. This type of inspection may involve notifying the country of origin of increased inspections; charging additional costs to the exporter and importer for inspection; and fumigating the cargo, thereby causing more delay and possibly fines and revocation of permits. The economic ramifications of these actions usually result in more diligent adherence to the import regulation.
- **Initiating more inspections in the country of origin and using preclearance programs to reduce and focus workloads at entry ports.** APHIS staff oversees or conducts inspections in the country of origin so that inspectors at U.S. receiving ports only need monitor these cargoes. APHIS' International Services (IS) unit now has preclearance programs for various commodities in 29 countries. APHIS also has a cargo release program with Mexico to reduce inspections of high-volume, low-risk commodities.
- **Improving coordination with other FIS agencies (Customs, FWS, and INS).** The FIS agencies use Port Quality Improvement Committees to improve port of entry operations and cross-train FIS staff relative to

APHIS' inspection needs. APHIS has begun providing computer equipment to 33 maritime ports and 26 airports to link to Customs' cargo databases, which identify people and vehicles with prior violations. Similarly, APHIS is working to improve linkages with cargo manifest databases to obtain cargo information that identifies shipments for inspections.

- **Implementing an AQI Results Monitoring Program.** This program measures the effectiveness of inspections nationwide and identifies those ports of entry with the highest risk relative to pests and diseases entering the United States. The program also identifies pest and disease risks associated with various commodities, their country of origin, and their means of entry. This program will allow APHIS to determine if the number of inspections performed at a given location for a given commodity adequately addresses the risk posed.
- **Working to improve the reliability of its data systems, such as its Workload Accomplishment Data System.** APHIS is consolidating its four PPQ regions into two regions to achieve improved national consistency. APHIS also is conducting program analysis and risk assessments to provide operational assistance to the AQI inspection programs to make improved inspection level and staffing decisions. This will allow APHIS to improve its focus on its more than 50 different inspection methods and technologies in high risk areas.

Congress authorizes APHIS to inspect commodities that enter the United States. As mentioned above, certain countries or commodities receive extensive monitoring and inspection before or upon arrival at a U.S. port. During an inspection, any organism found is immediately sent for identification. If APHIS cannot identify the organism at the port of arrival, it is sent immediately to taxonomic specialists, located in various areas of the United States, for identification. This request is considered an urgent interception for immediate classification. Identification is accompanied by an enhanced hazard risk assessment. All cargo is quarantined until the status of the organism can be determined.

This risk assessment process (Enhanced Risk Assessment for Determining the Quarantine Status of Exotic Organisms) uses three criteria with weighted risk factors (high, medium, low, unknown) for the amount of information available for each criterion. The first criterion is taxonomy; complete species or subspecies identification is preferred. The second criterion is hazard identification/distribution of the organism, such as whether the organism is known in the United States or is capable of establishment in the United States. The third criterion is agricultural concern: (1) whether or not it is known as an

agricultural pest or a vector of an agricultural pest) and (2) whether or not the organism potentially is capable of establishment in the United States. This information is used to determine the quarantine status of the organism and quarantine action for the commodity on which it was found. A detailed description of this risk assessment and quarantine status decision table can be found in appendix C. If the organism is found on the quarantine list, an Emergency Action Notification document (PPQ Form 523) is prepared and is sent to the shipper, consignee, and sometimes the country of origin's agricultural official. This document describes, in part, the organism, type of cargo, shipper, consignee or owner, country of origin, foreign phytosanitary permit number, and remedial action taken. This document is used to notify importers and/or shippers of the options available to them for commodities that are in quarantine status. The options available for the quarantined cargo are (1) destroy (by appropriate means), (2) fumigate (or use other treatment methods appropriate to kill the organism), or (3) refuse entry and return to the country of origin. The consequences of receiving a PPQ Form 523 are additional costs to the shipper, importer, and/or consignee because of delays, added treatment costs, and new shipping charges. Often, these costs exceed the profit margin of the commodity for the shipper or importer. From an economic standpoint, therefore, it is very undesirable to be cited with a PPQ Form 523.

Besides the inspection of regulated foreign logs, lumber, and other wood articles at the U.S. port of entry, APHIS requires Compliance Agreements with all wood processing facilities in the United States that process regulated foreign wood articles. The Compliance Agreement is a document among APHIS, the affected State agricultural or forestry official (State cooperators), and the appropriate facility official. The types of foreign wood processing facilities are as follows: dry kiln mill, sawmill, veneer mill, paper mill, particle board mill, and power plant. Certain requirements in the Compliance Agreement are common to all regulated foreign logs, lumber, and other unmanufactured wood articles processing facilities. Specific requirements to each type of regulated foreign wood processing facility are found in appendix C. Requirements common to all regulated foreign wood processing facilities are as follows:

1. Imported wood will remain segregated from other wood articles until processing is completed.
2. Imported wood will move to the facility in the most direct route as soon as reasonably possible with no diversions.
3. The facility will notify the PPQ work unit office, specified in the agreement, of the arrival of shipments at the processing facility.

4. Any pallets, dunnage, or other solid wood packing material used in the shipment of regulated wood must be mitigated, at least to the degree required for the regulated article, in addition to meeting the entry requirements for solid wood packing material.
5. Foreign lumber must be treated appropriately according to the wood type and end-product use. This action will be specific to the lumber processing facility. See appendix C for details.
6. The processing facility will keep a record or log book listing imported wood type (genus and species), quantity, origin (country), the importer of record or facility from which it was received, and a treatment completion date. This record will be made available upon request by APHIS and/or State cooperators.
7. APHIS inspectors and/or State cooperators will be permitted access to the lumber processing facility premises to monitor compliance.
8. The PPQ work unit office specified in the agreement shall be notified as soon as possible, but within 24 hours, when conditions exist that violate or compromise the conditions of this agreement.
9. The facility must request changes to the agreement in writing and submit the request to APHIS.
10. The agreement may be canceled, orally or in writing, by the APHIS inspector supervising its enforcement whenever the inspector finds that the facility, its employees, or agents have failed to comply with its conditions.

The elements in the Compliance Agreement are additional safeguards to prevent an exotic pest from escaping and establishing itself in the United States. The checks and notification system in place give the operators of the processing facility a local APHIS and/or State cooperator contact in the event of unexpected conditions. This safeguard, therefore, permits feedback at the Federal and State agricultural/forestry level.

c. Programs in Exporting Countries

As mentioned in the introduction of this section, APHIS certifies preclearance programs for some commodities in certain countries. These preclearance programs allow for more efficient use of port inspectors at the U.S. port of entry. Training for these programs is conducted by APHIS, PPQ personnel. All certifications are revokable if problems are observed. Preclearance of a

commodity does not mean that there is no inspection at the U.S. port of entry. Preclearance means that a less rigorous inspection may be possible, but does not require that a less rigorous inspection be conducted. APHIS has inspected the treatment facilities and inspection infrastructure in each country and determined that they are capable of preventing the introduction of exotic pests into the United States. Regulated foreign logs, lumber, and other unmanufactured wood articles are inspected at the U.S. port of entry for compliance with the treatment methods and other requirements of the Foreign Quarantine Regulations. As needed, APHIS port inspectors may be temporarily detailed to a foreign country to facilitate inspection and compliance.

APHIS has procedures and guidelines to ensure that treatment facilities in other countries meet our requirements for importation of regulated articles to prevent the dissemination or establishment of plant pests not known to exist in the United States. The following information is from a bulletin on APHIS Requirements for Treatment Facilities for Log Importation into the United States. It is an example of the heat treatment facility requirements. Countries and/or foreign companies must apply to APHIS for approval of facilities for heat treatment, fumigation, and cold treatment. Required information that must be submitted to the agency for approval of a heat treatment facility is as follows:

1. Detailed construction plans (including dimensions) and/or blueprints.
2. Detailed description of safeguards to be applied at the facility to maintain segregation between the treated and untreated logs. It is the responsibility of the facility to ensure that the treated articles are stored, handled, or safeguarded in a manner that prevents any infestation by plant pests after treatment, during storage and shipping.
3. Information on the make and model of the temperature recorder that will be used along with its accuracy and the number of sensors it monitors. The size of the heat treatment facility will determine the minimum number of temperature sensors needed. The recording system must meet the following specifications:
 - a. The recording system (platinum resistance temperature sensors and recorder) shall have an overall accuracy of ± 1.0 °F in the range of 155 °F to 170 °F with a resolution of 0.2 °F.
 - b. The recording system shall be capable of repeatability in the range of 155 °F to 170 °F. The temperature for each sensor shall be recorded at least once every 2 minutes during the 75-minute process to monitor potential temperature fluctuations and cold spots.

- c. An automatic temperature recording and controlling system shall record the temperature and duration of the treatment and generate a status report on the temperature settings throughout the treatment process.
 - d. If a strip chart recorder is used, the chart scale on the recorder shall be graduated with the minor scale marks every 0.1 of a degree in the range of 155 °F to 162 °F. The chart shall be of sufficient length to display the entire treatment.
 - e. Platinum resistance temperature sensors shall be such that the conditions of the environment will not affect their performance. The sensing unit shall be located within the first inch of the sensor. The size of the log will determine the appropriate length of the sensor sheath, which shall be 0.25 inches (6.4 mm) diameter or less.
 - f. The recording system shall be capable of individual channel calibration and continuous automatic monitoring of time and temperatures throughout the treatment process.
 - g. Each recorder shall be connected to a commercial line conditioner to provide protection from voltage irregularity, noise reduction, and harmonic distortion.
- 4. Electrical wiring throughout the facility must meet local and international safety code requirements. Earth grounding of all electrical wiring is required. Wires located near machinery or in a high traffic area must be shielded in a metal conduit to prevent damage.
 - 5. The treatment chamber must be designed to allow for the installation of numerous portable probes throughout the load. These probes will be positioned at the direction of APHIS personnel during the certification or precertification process.

APHIS evaluates each proposal separately and informs the applicant of any modifications needed. When the plans and blueprints are finally approved, the applicant can initiate construction or renovation. When construction is 50 percent to 70 percent completed, the applicant may (at his or her option) request an onsite inspection by USDA. Upon completion, each facility must submit a proposed operating plan and photographs. The results of two successful trial runs (consisting of the printouts of internal log temperatures during treatment) must also be submitted.

At this time, APHIS sends an inspector to physically inspect the facility and officially monitor two additional test runs using debarked logs. The internal temperature of the logs is monitored during the treatment using thermocouples or thermistor probes drilled to the center of several logs. The minimum treatment temperature of 160 °F (71.1 °C) must be reached in the centers of the logs before the 75-minute treatment is considered to have begun.

If the two complete test runs meet APHIS' requirements, a Certificate of Approval is issued. At that point, the inspectors from the Ministry of Agriculture/Forestry of the respective country will be responsible for monitoring treatments and issuing a Phytosanitary Certificate or other mutually agreed upon document to accompany each individual shipment of logs.

In addition, a Cooperative Service Agreement (CSA) is required between APHIS and the treatment facility in the exporting country (cooperator). The CSA is a written document that describes the commodity-specific work plan and the responsibilities of the cooperator and APHIS. Under the CSA, the APHIS inspector(s) has free access to inspect and examine the physical records, observe facility operations, and provide training as needed. Under the CSA, the cooperator will (1) deposit sufficient monies to cover salaries and other expenses for all APHIS personnel needed to perform work as described in the work plan under this agreement; (2) obtain host country permits or licenses, as required, so that APHIS personnel can have free access to facility locations; and (3) will not certify for shipment to the United States infested shipments if quarantine pests are found. A detailed CSA form can be found in appendix C.

Post-entry inspection of logs is still conducted at the U.S. port of entry by PPQ port inspectors. Failure to comply with required treatment conditions will result in loss of importation license for at least 1 year and/or civil penalties. No new permit will be issued to an applicant who has had a permit withdrawn in the last 12 months. CSA's are not granted to applicants in countries that do not have the physical infrastructure to ensure compliance under these requirements.

In the interest of facilitating trade with the United States, two countries (New Zealand and Chile) have incorporated APHIS' unmanufactured wood article importation requirements, 7 CFR 319, into their governmental protocols and procedures.

The New Zealand Ministry of Forestry has incorporated into its procedural manuals used by the New Zealand forest industry specific processing requirements related to logs, raw lumber, and heat-treated lumber as set by the APHIS regulation in 7 CFR 319.40–5. The New Zealand Ministry of Forestry ensures United States importation requirements are met through preshipment port inspections (leading to an import certificate) and by training industry site

inspectors on U.S. procedures for products not requiring an import certificate, e.g., kiln-dried lumber. The New Zealand Ministry of Forestry regularly audits New Zealand companies on their compliance with U.S. unmanufactured wood production requirements. These audits include examination of records maintained by exporters relating to the age of logs, debarking operations, the concentration of anti-sap stain chemicals applied, and the fumigation of each consignment.

The Chilean Agricultural and Livestock Service (“SAG”) has world-wide recognition in pest management programs that affect exported wood products. Chile has developed a coordinated program with the private sector to deal with phytosanitary problems in an efficient way. The cooperation is with the Controladora de Plagas Forestales S.A., a corporation created by the forestry industry to prevent pest outbreaks in forest resources. Most wood products from Chile that are imported into the United States are in the form of sawn kiln-dried lumber. This lumber is processed under the requirements stipulated by APHIS. A small percentage of Chilean wood is imported into the United States as logs. However, as of late 1997, Chilean exporters of unmanufactured wood products are heat treating logs, as described in 7 CFR 319, destined for the United States.

d. Risk of Noncompliance

Risks associated with noncompliance with the Federal Quarantine Regulations have been addressed by APHIS (60 FR 27669–27670, May 25, 1995). It is APHIS’ position that noncompliance with these or other regulations increases the risk of importing a potentially damaging pest to the United States. It is also the agency’s position that the risks or costs of getting caught must be sufficiently high to provide a strong deterrent for noncompliance.

Therefore, APHIS continues to enforce its regulatory activities with great diligence and scrutiny. In Fiscal Year (FY) 1996, APHIS handled 632 cases involving violations of the Plant Protection and Quarantine (PPQ) regulations promulgated under the authority of the Federal Plant Pest Act (FPPA), as amended, and the Plant Quarantine Act, as amended (USDA, APHIS, M&B, 1996). Of this total, 598 cases were closed during FY 1996. Most of the alleged violations (72 percent) were resolved through payment of civil penalties by stipulation agreement between APHIS and the violators. Resolution of the cases also was achieved, in part, either by APHIS’ issuance of a Letter of Warning to the alleged violator, by issuance of a Decision and Order by an Administrative Law Judge (ALJ) (after the filing of a formal administrative complaint by the Administrator of APHIS), by criminal prosecutions, or by closure with no penalty.

In FY 1996, Investigative and Enforcement Services (IES) collected \$71,490 in civil penalties from stipulation agreements, and ALJ's assessed \$48,512 in civil penalties in their Decisions and Orders. From FY 1994 through FY 1996, IES offered stipulations to resolve approximately 1,600 cases and ALJ's issued approximately 250 Decisions and Orders.

In cases involving cargo violations, it is more time-efficient to issue a stipulation than to pursue formal administrative action. When the case is not flagrant and when the pest risk is contained, IES issues stipulations to first-time violators. For second-time or flagrant violations, the case is referred to USDA's Office of the General Counsel to file an administrative complaint or to refer to the appropriate U.S. attorney's office for criminal prosecution (USDA, APHIS, M&B, 1996). Therefore, APHIS keeps importers and shippers informed of the penalties for filing inaccurate or fraudulent documents or failure to meet the regulatory requirements of 7 CFR Part 319. The importer or shipper could be subject to civil penalties, criminal fines, jail sentences, and loss of revenue due to APHIS' rejection of commodities, permit applications, and/or compliance agreements.

A major tool for APHIS concerning noncompliance of unmanufactured wood articles is the agency's authority either to refuse the wood articles, require that the wood articles be treated by fumigation or heat, or require that the entire cargo be destroyed. The logistics of destroying a shipment of logs is immense and impractical. The more realistic action would be to deny off-loading of the cargo or *in situ* treatment of the cargo before off-loading. Either of these options is costly to the shipping line and exporter, who must assume all costs for delays and treatments. The daily cost of having a ship delayed in port because of noncompliance would soon exceed the value of the wood article cargo itself.

Revocation of a permit or compliance agreement is for a minimum of 1 year—a length of time that would be very costly for an importer or shipper not to be allowed to import wood articles into the U.S. market. In addition to these penalties brought by APHIS, the importer or shipper may be liable for other legal actions brought by individuals or groups.

Self-certification or preclearance programs, such as the one for Chilean fruits and vegetables, have been successful in the past when it is clear to all parties that their best interests are served by accurate and reliable certification. Accuracy of these programs is tested at the U.S. port of entry. Fraudulent documents or certifications may conflict with the stated requirement on the APHIS import permit or other supporting documents at the port of entry. Spot inspections for plant pests or evidence of required treatment will aid in document verification. As mentioned above, the consequences to the importer or shipper are substantial.

APHIS is determined to demonstrate that the use of fraudulent documents is not worth the risk (USDA, APHIS, M&B, 1996).

APHIS is aware that certain countries are considered high crime in areas of international trade because of fraudulent activities outside of official channels (60 FR 27669–37670, May 25, 1995). The reason for this high crime label varies for each country. Regardless, APHIS takes particular care in enforcing regulatory requirements with regard to importation of regulated articles from these high crime countries. APHIS, along with other Federal agencies and international governments, is actively participating in an effort to identify and reduce the level of high crime in international trade.

APHIS believes that the requirements for the importation of logs, lumber, and other unmanufactured wood articles, under 7 CFR Part 319, protect the United States from the importation of plant pests. APHIS also believes that the agency's strict and vigorous enforcement of the regulation and the subsequent penalties will deter noncompliance of 7 CFR Part 319 by importers or shippers (USDA, APHIS, M&B, 1996).

3. Human Health Effects of Control and Eradication Efforts

a. Introduction

This section discusses how the efforts to control or eradicate an introduced plant pest may impact human health. It explains the planning and environmental processes that APHIS follows when an exotic plant pest is detected in the United States and how human health issues are considered. The possible actions (types of programs and program treatments) that APHIS can take against plant pests and how they may impact human health are discussed. Also, potential impacts that could occur because of actions taken or not taken, as well as documented cases of plant pest introductions and their possible human health impacts are reviewed. The potential impacts to human health that may result from treatments required by the wood import regulation were discussed in detail in the EIS (USDA, APHIS, 1994) and will not be repeated here.

Effects on human health that may result from control or eradication efforts or no action following an exotic plant pest introduction occur from several sources—

- chemicals or biologicals that may be used as control agents or disinfectants for control programs,
- actions inherent in programs that require mechanical removal and destruction of trees or fruits, or
- the various environmental impacts or behavioral effects of the invading pests themselves.

In addition, having an exotic pest present in the United States may lead countries importing our products to require additional treatment (usually fumigations) of

products being exported from the United States, often resulting in increased use of methyl bromide or other pesticides, which could have direct or indirect human health impacts.

Factors that may influence the impact or the extent of effect to human health from control efforts include—

- the specific pest that is introduced and its potential for movement and establishment,
- the pesticide or treatment required to control the pest,
- the type of application or treatment that would be appropriate,
- the extent of the infestation,
- the location of the infestation,
- the type of program delivery available, and
- the degree of success of the program.

Because it would be impossible to predict the specific programs and treatments that APHIS may implement, this discussion must be of a general nature. Each program would be dependent upon many factors, including the specific pest and risk potential, the location, and available treatment options. There are thousands of plant pests, some known and others unknown, that could potentially be introduced through importation of wood articles. Some may be benign, while others may pose grave risks. Because eradication programs would have to be tailored to specific conditions, it is extremely difficult, if not impossible, to predict precise impacts to human health. Site-specific analyses are provided on potential impacts to human health and environmental resources for eradication programs through environmental assessments. However, general impacts to human health can be determined based on pest eradication effects and likely future treatment methods, as discussed below.

b. Human Health Effects From Past Plant Pest Introductions in the United States

To understand the potential for human health impacts following a plant pest introduction, two examples are provided of exotic plant pest introductions into the United States that have resulted in control or eradication efforts that had the potential to impact human health.

The first example is the introduction and establishment of the gypsy moth in some regions of the United States. Although the European strain was introduced intentionally by an entomologist in the 1860's, the Asian strain has been introduced inadvertently from transport ships. While introductions of the Asian strain are believed to have been successfully eradicated thus far, both strains have the potential to become established. Indeed, the European strain has become established in much of the northeastern United States. Therefore, APHIS and its

State cooperators have undertaken control or eradication efforts when either strain is detected outside the generally infested northeastern United States.

As indicated in the Human Health Risk Assessment (USDA, FS and APHIS, 1995b) that supports the environmental impact statement for gypsy moth management (USDA, FS and APHIS, 1995a), effects on humans, either the public or workers, may result from treatments to control or eradicate the various life stages of the moth, or from the moth itself. Insecticides that may be used include *Bacillus thuringiensis* var. *kurstaki* (*Btk*), diflubenzuron, Gypchek® (gypsy moth nucleopolyhedrosis virus), DDVP (dichlorvos), or the mating disruptor disparlure. Possible effects on humans that may occur due to the use of the biological insecticides *Btk* or Gypchek® include irritation of the skin, eyes, or respiratory tract. Exposure to DDVP, while unlikely because of its use in traps, may cause enzyme inhibition. Exposure to high levels of diflubenzuron is known to have effects on the blood and may induce methemoglobinemia, which reduces transport of oxygen in the blood. Disparlure, a pheromone that causes mating disruption, while not causing any direct human health effects, is suspected to persist for extremely long periods in the human body, all the while acting as an attractant to adult male moths. This is reported to be a considerable nuisance (personal communication from Abbott and Rubin, 1997). On the other hand, human exposure to the larval stages of gypsy moths has resulted in rashes and other skin reactions, especially in children or other individuals who spend a substantial amount of time outside (USDA, FS and APHIS, 1995a and 1995b).

Another example of an introduced exotic plant pest is the Asian long-horned beetle, which most likely entered the United States (New York) before 1995 in a shipment that contained dunnage. The program to control this pest requires cutting and destroying all infested trees; pesticide applications generally are not a part of the program. Therefore, the potential impacts to human health from control efforts would result more from incidents occurring during the mechanical removal and destruction of the trees, which in this case involved chipping and burning of the cut trees. Potential impacts to people from an operation to remove trees could include accidents involving the vehicles used in transport of the workers, downed trees, or chips. In addition, workers could be at risk of injury from the machinery used to chip the wood. Both workers and the general public, if the operation is not properly supervised, may incur injury from falling trees or limbs. Although burning of trees or the chips normally would be a consideration in an assessment of human health due to exposure to the combustion products, in this case the facility was an electric generating plant, which produces a clean burn (personal communication from Goodman, 1997). Open burning did not occur. Should open burning be necessary, then both workers and the general public may be exposed to the resulting combustion products, as well as potential risks from a controlled fire that somehow may get out of control. The only other impacts to human health may be from the damage

caused by the insect itself. In this case, any damage caused by the beetle that predisposed the trees or tree limbs to falling could be considered to have a possible impact on human health.

c. Planning Process and Environmental Analysis

In the case of an inadvertent plant pest introduction, APHIS determines if eradication or containment of the pest is feasible. When eradication or containment is feasible, APHIS develops a management plan designed specifically to respond to the individual case. Because the type of program implemented by the agency or its cooperators may influence the degree of impact to human health, an integral part of the planning process includes a NEPA analysis that, among other considerations, analyzes site-specific human health issues. The NEPA analysis, including any risk assessments that support the environmental impact statement or the environmental assessment, provides information to assist APHIS in determining the best approach to respond to the pest introduction while protecting human health. If human health impacts are a concern, and sufficient control can be achieved with a less ambitious or less environmentally damaging alternative with less impact to human health, APHIS may elect to address an infestation with a less aggressive suppression program rather than an eradication program. The level of effort and degree of intervention for a suppression program may be less than that for an eradication program in the short term. The level of trapping may be lower, and the amount of pesticide applied over a specified area within a certain timeframe may be less, thereby lessening the amount of pesticide available in the environment for contact by humans. On the other hand, it may be necessary for a suppression program to continue indefinitely, resulting in possibly greater cumulative effects.

Although human health issues are always taken into consideration before implementing a program, APHIS analyzes and evaluates many issues that must be weighed in balance. An exotic plant pest introduction into the United States imposes a responsibility on APHIS to eradicate or control the pest, if possible, to prevent harm to or destruction of agricultural products. Under these circumstances, it is not only human health issues, but the specific requirements dictated by legal authorities and the type of pest that affects many aspects of program delivery. Depending on the pest, the threat of establishment, the potential for agricultural and economic harm, and the feasibility of treatment, APHIS may respond to an infestation in one of several ways, ranging from no action, to suppression, to eradication. If the pest is not causing immediate damage or is causing damage in a discrete area that can be contained, and is highly unlikely to become established (that is, the pest is introduced in a region that is inhospitable to its continuing life cycle, and it is not likely to be transported to a hospitable area), or if treatment is infeasible, APHIS may determine that treatments are unnecessary and respond with no action. If, on the

other hand, there is the potential to cause immediate or long-term harm, (that is, there is some risk of the pest adapting, reproducing, and becoming environmentally or economically damaging), APHIS may attempt to prevent its spread or relocation in a suppression program or to eliminate it in an eradication program.

Within each of these programs, a variety of treatments and methods are available to eradicate or control plant pests, with varying degrees of potential impact on human health. These include trapping and monitoring, regulatory quarantines, pesticide applications, biological controls, sterile insect releases, physical controls (such as cut, chip, and burn), silvicultural practices, and combinations of these treatments and methods. For the most part, programs conducted by APHIS to eradicate exotic plant pest species require some application of pesticides. Although it is generally the chemical pesticides that elicit concern from the public, some minor health effects also have been attributed to biological pesticides (e.g., skin, eye, and respiratory tract irritation from *Btk*). For some pests, removal and destruction of the host plants are necessary. This treatment carries with it the risks inherent in using mechanical equipment and moving large loads. Trapping and monitoring require program workers to travel over great distances and sometimes in rough terrain, and also to handle traps containing pesticides. In addition, pesticides in the traps contribute to the chance for exposure to the public. Programs geared toward suppression of an infestation may be able to rely more on the options that do not require pesticides. Regulatory quarantines, biological control organisms, sterile insect releases, and silvicultural practices generally do not result in substantial human health impacts. Unfortunately, not all treatment options are effective against or applicable to every pest species.

For infestations that are treated with pesticides, applications are generally made using one or more of the following methods—

- ground equipment for broadcast spraying, directed spot spraying, or soil drenches;
- aerial broadcast or spot application; or
- fumigation of soil or the affected commodity.

The application method affects not only the number and type of individuals (workers or the public) who may be exposed, but also the possible routes of exposure. Aerial broadcast applications generally provide a greater opportunity for direct human exposure via dermal or inhalation routes. However, the concentration of the pesticide at any one place may be less than an exposure to, for example, a soil drench, which would likely result in a more limited dermal exposure (except, perhaps, in children), but at a higher concentration. Using ground rather than aerial equipment generally permits a more accurate

application and generally avoids contamination of crops (unless they are the targets), backyard gardens, and water resources.

d. Potential Pesticide Use

A pest eradication or control program could involve the use of a variety of pesticides, which have varying degrees of toxicity to humans. Chemical insecticides, fungicides, herbicides, and miticides, as well as biological pesticides or attractants and biological control organisms, are included in the arsenal of agents available for use. The type of program, location of infestation, and biology of the specific pest dictate the most effective control agent, as well as the type of application that is likely to be used. Before program implementation, an analysis of human health (and other) impacts would be performed to determine if and how the program would proceed, and what, if any, mitigation measures should be taken to lessen impacts.

Individuals who may be inadvertently exposed to pesticides that are used to control or eradicate an introduced plant pest, will likely demonstrate a range of sensitivities to the effects of exposure. For the most part, public or worker exposures that are likely to occur from pesticide applications used to control or eradicate plant pests will result in negligible, or at least very low, risks of adverse effects. This is reasonable since pesticide registrations are granted based upon studies that determine mitigable risk to workers and the public. The information on application methods, rates, target plants or organisms, and potential hazards to avoid is included in the label for the product. However, APHIS does not rely on the assumption that every application in every program will proceed as expected and, therefore, prepares or uses currently available human health risk assessments to define risks under typical and extreme circumstances, including accidental. Even so, some individuals with multiple chemical sensitivity are uncharacteristically sensitive to many foreign substances, including some pesticides, and may respond with a variety of adverse effects (respiratory, neurologic, digestive, allergic) to even extremely low levels of exposure. Generally speaking, the risk values that are derived cannot quantitatively consider this extreme circumstance, but the factors applied to risk values attempt to accommodate this uncertainty.

A number of risk assessments have been prepared for programs that use pesticides that also might be used for forest protection programs. Therefore, APHIS is aware of any potential human health risks from these pesticides. Some risk assessments were prepared specifically for programs that could be implemented as a result of a pest introduction from logs, lumber, or other unmanufactured wood articles (i.e., gypsy moth). Other risk assessments, even though they were prepared for other programs, include human health risk information for pesticides that could be used in programs against forest pests.

For example, insecticides for which human health risk assessments are available include—

- *Btk*, diflubenzuron, Gypchek®, dispartlure (technically, dispartlure is not an insecticide, but is a chemical used to disrupt mating of gypsy moths), and dichlorvos for the gypsy moth management program (USDA, FS and APHIS, 1995b);
- malathion (and malathion bait), diazinon, chlorpyrifos, fenthion, and methyl bromide for the Medfly eradication program (USDA, APHIS, 1993);
- malathion, azinphos-methyl, diflubenzuron, methyl parathion, chlorpyrifos, and propoxur for the boll weevil cooperative control program (USDA, APHIS, 1991b);
- diflubenzuron, malathion, carbaryl, and acephate for the grasshopper cooperative management program (USDA, APHIS, 1996);
- acephate, *Bacillus thuringiensis*, carbaryl, and malathion (plus diesel oil and kerosene carriers) for the western spruce budworm management program in Washington and Oregon (USDA, FS, 1989a);
- chlorpyrifos and lindane for a southern pine beetle suppression program (USDA, FS, 1987b);
- acephate, carbaryl, chlorpyrifos, diazinon, dimethoate, dormant oil, fenvalerate, malathion, potassium salts of fatty acids, for nursery pest management programs for the U.S. Forest Service (USDA, FS, 1989b, 1992c, 1993b, 1993d, 1994a); and
- acephate, azinphos-methyl, *Bacillus thuringiensis*, bifenthrin, chlorpyrifos, esfenvalerate, lindane, and permethrin for seed orchard management programs for the U.S. Forest Service (USDA, FS, 1995a, 1995b).

Furthermore, the U.S. Forest Service has prepared many documents that provide comprehensive toxicology and environmental fate information on many of the pesticides that would likely be used in a forest pest management program (USDA, FS, 1984, 1986a, 1986b, 1987b, 1989c).

Fungicides for which human health risks have been analyzed include—

- banrot, benomyl, captan, chlorothalonil, copper sulfate, DCNA, dodine, ethazol, maneb, metalaxyl, thiram, and triadimefon for nursery pest management programs for the U.S. Forest Service (USDA, FS, 1989b, 1992c, 1993b, 1993d, 1994a, 1994b);
- boron compounds, chlorothalonil, and propiconazole for seed orchard management programs for the U.S. Forest Service (USDA, FS, 1995a, 1995b); and
- iprodione, mancozeb with thiophanate-methyl, propiconazole, and thiophanate-methyl to supplement the multiregional final environmental impact statement for nursery pest management (USDA, FS, 1994c).

In addition, risk assessments have been prepared for a number of herbicides. Some examples of available risk assessments on herbicides include—

- Vanquish (USDA, FS, 1995c);
- triclopyr (USDA, FS, 1996a);
- glyphosate (USDA, FS, 1996b);
- hexazinone (USDA, FS, 1997);
- amitrole, atrazine, 2,4-D, dicamba, glyphosate, hexazinone, picloram, and tebuthiuron for controlling noxious weeds and poisonous plants (USDA, FS, 1988a);
- bifenox, 2,4-D, DCPA, dicamba, diphenamid, glyphosate, napropamide, oxyfluorfen, sethoxydim, and simazine for nursery pest management (USDA, FS, 1989b, 1992c, 1993b, 1993d, 1994b);
- asulam, atrazine, 2,4-D, dalapon, dicamba, fosamine ammonium, glyphosate, hexazinone, picloram, simazine, and triclopyr, plus the contaminants 2-butoxyethanol and 1,4-dioxane, for vegetation management for reforestation (USDA, FS, 1988b, 1991b); and
- many of those previously mentioned plus bromacil, 2,4-DP, diuron, and possible carriers diesel oil and kerosene for an EIS for managing competing and unwanted vegetation (USDA, FS, 1988c).

The likelihood of these herbicides being used for pest control is minimal because of the low probability of viable plant material being introduced on imported logs, lumber, and other unmanufactured wood articles.

Although human health risk assessments have been prepared for this vast array of pesticides, including insecticides, fungicides, and herbicides, these all have been prepared in association with a specific program describing treatment methods and program delivery, as well as possible deviations from standard operating procedures. The human health risks that were determined for workers and the general public resulted from analyses of typical applications, and also from extreme circumstances, including imprudent handling or accidents. The potential risk to human health ranged from negligible to highly unlikely; the possible effects ranged from none or minor effects, such as skin irritation, to adverse or frank effects, such as kidney damage or cancer. However, both the degree of risk and the extent of effects are so highly dependent on the specifics of the program that foretelling these details prior to defining a program is not possible.

Despite this extensive list of pesticide risk assessments, if an introduced plant pest is one that is not known to APHIS or the U.S. plant protection community, information may be insufficient to develop a management plan. Under these circumstances, it may be necessary to engage in new research to develop a strategy, pesticide, or control agent that is capable of controlling the plant pest. This could result in efforts ranging from experimental applications of known or newly developed pesticides, to release of biological control agents, to methods development for new pesticides or biological control agents that could affect human health.

If the initial eradication program is not successful and the pest either establishes itself or translocates to other areas, it may lead to continuing program activities with increases in pesticide applications, as well as potential involvement of the public or agricultural community in treatment efforts. This could lead to uncontrolled pesticide applications or applications that are duplicated because of lack of communication between individuals. Either of these situations has the potential to increase the level of pesticides in the environment and affect human health.

e. Pest Characteristics That Potentially Affect Human Health

A plant pest's ability to move and become established may affect the type of program and the aggressiveness of the program delivery, and thereby potentially affect human health. An exotic pest accompanying wood or wood articles entering the United States is likely to be detected at the port of entry, at which point action would be taken. Either the shipment is returned, or the ship and/or its contents are treated, generally by fumigation using methyl bromide. Under

these circumstances, it generally would be workers (such as inspectors, applicators, dockworkers, and truckers) who may be directly affected. If care is not taken to contain the fumigant, other individuals immediately surrounding the treatment area may be exposed. Indirect global effects from methyl bromide use have been previously discussed (USDA, APHIS, 1994).

Should preentry mitigation and inspection at the port of entry fail to detect or eliminate a plant pest, it is possible that the pest could be released locally. Local infestations generally can be treated and contained with the implementation of regulatory quarantines, although this is always dependent on the specific plant pest. Pesticides may be used, sometimes along with sterile insect releases. However, if the pest still persists, it could move or be transferred from its release site to other areas, States, or regions, possibly leading to other pockets of infestation. If the small infestations are not controlled, an extensive infestation could occur, possibly leading to the establishment of the plant pest. Human health impacts could result from program actions, or may come from the plant pest itself. As mentioned previously, some life stages of the gypsy moth have been shown to produce skin irritation in humans, particularly in children (USDA, FS and APHIS, 1995b).

Another factor that affects the degree of impact to human health is the location and extent of the infestation of the introduced plant pest. Treatments may occur in very localized areas where fewer people may be exposed or over a broad area where greater numbers of people may be exposed. Treatments may be conducted at the port of entry, in remote areas, or in highly populated residential or recreational areas. Although residents and recreationists are notified when treatments are scheduled to occur, there is still the opportunity for exposure. It may be necessary to apply treatments over schools, hospitals, or other sensitive areas, or in areas occupied by sensitive individuals. In addition, applications may be on crops, near backyard gardens, water resources, or recreational areas, whereby individuals may be exposed through ingestion of contaminated food articles or water or through skin contact with contaminated surfaces. Applications may occur at night or during the day, which could affect different groups of individuals.

f. Potential Pest Introductions From Imported Logs, Lumber, and Other Unmanufactured Wood Articles

According to the pest risk assessments for Siberia and the Soviet Far East (USDA, FS, 1991a), New Zealand (USDA, FS, 1992a), and Chile (USDA, FS, 1993a), the plant pests that may present the most risk of introduction from imports of logs, lumber, and other unmanufactured wood articles include Asian gypsy moth and nun moth, pine wood nematodes, larch canker, spruce bark beetle, and *Annosus* root disease from Siberia, and drywood termite, root disease

fungus, pinhole borers, huhu beetle, and a woodwasp/wood decay fungus from New Zealand. Prior to implementation of the wood import regulation, numerous types of insects and several species of fungi had been found on shipments of Monterey pine logs from New Zealand (USDA, FS, 1992a). Although most of the organisms from New Zealand were detected on logs that had not been treated, some organisms (an aphid, a spider, and mites) were found on logs that had been fumigated. (These may have been domestic organisms that were attracted to the wood after it arrived in the United States, but that is not certain.) Because the regulatory requirements are so stringent for wood articles imported from Siberia and the Soviet Far East, the largest volume of imports is likely to come from New Zealand and Chile.

It may be possible to treat some plant pests, such as termites, with pesticides in soil drenches, if the infestations are small and localized. Other plant pests could be treated with aerial or ground applications of pesticides. For the most part, public health would not be affected by small operations unless the treatments were required in residential or recreational areas. Even under these circumstances, program workers provide notification of treatment schedules to individuals, such as residents or recreationists who may be impacted by pesticide applications. Health of workers applying the pesticides or the fumigant could be affected if proper procedures are not followed. However, program workers are required to adhere to standard operating procedures and follow all label directions, which serve to mitigate potential impact to themselves, as well as to the potentially exposed public. Overall use of methyl bromide will not be increased because its production and importation are limited by the Montreal Protocol and the Clean Air Act, which identify methyl bromide as an ozone depletor. Any increase in AQI use of methyl bromide would result in a decrease of other uses.

For the most part, it is not feasible to control wood-boring pests (e.g., wood wasps, long-horned beetles, and deep wood fungi) using pesticides. For a large portion of its life, the woodborer is deep inside the wood where pesticides cannot reach. Unfortunately, many beetles, besides causing physical damage to trees by boring or egg laying, also act as vectors for tree diseases, such as fungi, bacteria, or viruses. If these diseases were to become dispersed over large areas, the options for controlling them with pesticides are severely limited. The appropriate treatment, in a number of these situations, would be removal and destruction of the trees. The methods used to destroy the trees after they were cut would likely be chipping and/or burning. The impacts to humans from the cutting, removal, and destruction of the infested trees would be similar to those discussed above in the Asian long-horned beetle example.

It is possible that an exotic plant pest may be introduced on imported logs, lumber, or other unmanufactured wood articles. Consideration of the human

health impacts from control or eradication efforts, or the lack of such efforts in response to a plant pest introduction, is an important component of a thorough evaluation of risks to human health. Because many factors enter into the determination of impacts to workers or the general public from control programs that may be required due to an inadvertent plant pest introduction, it is impossible to predict exact human health consequences. However, as an integral part of any program, a NEPA analysis is prepared that describes potential risks to human health and other resources.

C. Point 3—Comparison of the Alternatives

1. Introduction

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), is charged with preventing the introduction and dissemination of exotic animal and plant pests and pathogens in the United States for the purpose of protecting its agricultural, aquacultural, and forest resources. One of the ways APHIS accomplishes its mission is through regulating imports, such as agricultural items and plant-related materials, that may harbor plant pests. In response to increasing concern regarding the introduction of exotic plant pests, APHIS promulgated a regulation to eliminate any significant plant pest risks presented by the importation of logs, lumber, and other unmanufactured wood articles into the United States. As part of the NEPA process and as a result of the scoping process, APHIS identified and considered six alternatives to decrease the probability of the pest establishment in U.S. forests:

Alternative 1—No Action

Alternative 2—Proposed Regulation

Alternative 3—Prohibit Untreated Wood Except Packing Material

Alternative 4—Prohibit Untreated Wood

Alternative 5—Prohibit Unmanufactured Wood Except Packing Material

Alternative 6—Prohibit Unmanufactured Wood

These six alternatives represent a full range of reasonable alternatives, as required by NEPA. Table 4–6 provides an overview of the types of wood articles that would be regulated under each of the six alternatives. The alternatives are then explained in more detail in the subsections of this introduction.

Table 4–6. Ability to Import Various Types of Wood Commodities Under Each of the Six Alternatives

Type of commodity	Alternative					
	1	2	3	4	5	6
Untreated wood	Yes	Conditionally	No	No	Yes	No
Unmanufactured wood	Yes	Conditionally	No	No	No	No
Packing material	Yes	Conditionally	Yes	Conditionally	Yes	No

a. Alternative 1—No Action

The no action alternative allows importation of logs, lumber, and other unmanufactured wood articles to continue as it did prior to the regulation published on May 25, 1995. Under these conditions, APHIS has the authority to inspect, require treatment, or refuse entry (or destroy) any wood article shown by inspection to be harboring plant pests. Under this alternative, importers are not required to treat wood articles. However, if an importer decides to treat wood articles, there are no restrictions regarding the types of pesticides that can be used. Therefore, if the importer chooses, pesticides that are banned in the United States could be used to treat wood articles. Under the no action alternative, APHIS would continue to discourage the importation of wood articles from Siberia, based on the results of a recent risk assessment (USDA, FS, 1991a), but APHIS would allow entry of these articles contingent on inspection.

The remaining five alternatives considered in the EIS all restrict, to varying degrees, the importation of logs, lumber, and other unmanufactured wood articles except from Canada and the Mexican states that border the United States. Alternatives 2 through 6 allow imports from these areas with an accompanying importer document or certificate that verifies the origin of the articles and certifies that they have not moved outside these areas. Alternatives 2, 4, and 6 restrict importation of unmanufactured wood articles and wood packing materials. Because these alternatives cover all wood articles, including packing materials, they would best prevent plant pest introduction. Alternatives 3 and 5 restrict the importation of unmanufactured and/or untreated wood articles, but do not require treatment of wood packing materials. Because these alternatives exempt packing materials from regulation, they are less protective than alternatives 2, 4, and 6.

b. Alternative 2—Proposed Regulation (Preferred Alternative)

Alternative 2, the preferred alternative, allows importation of unmanufactured wood articles (as defined in table 4–7) that meet certain conditions, as described below:

- A permit must either be issued by Plant Protection and Quarantine, APHIS, for the importation of a regulated article prior to its arrival at a U.S. port, as specified in tables 4–8 or 4–9, or must meet the requirements of a general permit as outlined in the wood import regulation and summarized in table 4–10.
- An import document or certificate must accompany every shipment of regulated articles verifying that the conditions of the APHIS wood import regulation have been met. The only exceptions to this

requirement are set forth in sections 319.40–2 and 319.40–3 of the regulation.

- At the time of arrival, all regulated articles are subject to inspection to ensure that the shipments comply with the requirements and that no plant pests of concern are present. If upon inspection any signs of plant pests are found or if the inspector finds that the requirements for importation and entry have not been met, the inspector has two options. The inspector either can refuse entry of the regulated article into the United States or can require safeguards or pest mitigation measures, such as treatment or destruction of the commodity (usually by incineration), that would minimize the risk of plant pest introductions.

c. Alternative 3—Prohibit Untreated Wood Except Packing Material

There are only two differences between this alternative and the preferred alternative. The first difference is that this alternative would not permit importation of any untreated logs, lumber, or other unmanufactured wood articles (except from Canada and Mexican states that border the United States). The second difference is that, under this alternative, all packing materials would be exempted from treatments. This would include loose wood packing materials, such as excelsior, sawdust, and wood shavings, as well as solid wood packing materials including, but not limited to, dunnage, crating, pallets, blocks, drums, cases, and skids. See tables 4–8, 4–9, and 4–10 for more specific permit requirements for alternative 3.

d. Alternative 4—Prohibit Untreated Wood

Alternative 4, like alternative 3, prohibits the importation of any untreated logs, lumber, and other unmanufactured wood articles (except from Canada and Mexican states that border the United States). Unlike alternative 3, this alternative requires the treatment of wood packing materials. These treatments would consist of heat treatment and application of insecticides and fungicides registered by the U.S. EPA. See tables 4–8, 4–9, and 4–10 for more specific permit requirements for alternative 4.

e. Alternative 5—Prohibit Unmanufactured Wood Except Packing Material

Alternative 5 prohibits the importation of any unmanufactured wood articles (except from Canada and Mexican states that border the United States). This alternative, however, does not regulate packing materials.

f. Alternative 6—Prohibit Unmanufactured Wood

Alternative 6, which is the most restrictive of imports, prohibits the importation of any unmanufactured wood articles (except from Canada and Mexican states that border the United States). It is similar to alternative 5 except that all wooden packing materials also would be prohibited.

Table 4–7. Alternative 2: Key Aspects of Subpart 40 Definition of Regulated Articles

Regulated articles include—		
<ul style="list-style-type: none"> • Logs • Lumber • Whole trees (nonpropagative) • Bark • Cork • Pickets • Stakes • Shingles • Laths 	<ul style="list-style-type: none"> • Any cut tree or portion of a tree not solely consisting of leaves, flowers, fruit, buds, or seeds • Solid wood packing materials • Humus • Wood for composting • Litter 	<ul style="list-style-type: none"> • Painted raw wood products • Hog fuel • Sawdust • Excelsior • Wood chips • Wood mulch • Wood shavings
The above articles must be unprocessed or have received primary processing only. Primary processing includes—		
<ul style="list-style-type: none"> • Cleaning (removal of soil, limbs, foliage) • Debarking • Rough sawing • Rough shaping 	<ul style="list-style-type: none"> • Spraying with fungicide or insecticide • Fumigation 	

Table 4–8. Requirements for Specified Articles

Applicable alternative	Article	Requirement
2	Bamboo timber	<ul style="list-style-type: none"> • Timber, if completely dry, is eligible for import. • Timber may be imported into Guam and Northern Mariana Islands.
2, 3, 4	Radiata pine logs and/or lumber from Chile or New Zealand and Douglas-fir logs and/or lumber from New Zealand	<ul style="list-style-type: none"> • Wood must be from live, healthy trees which are apparently free from pests. • Logs must be debarked and fumigated within 45 days of felling and prior to arrival in the United States, and logs must be in the same sealed container or hold on a ship as fumigation occurred.

Table 4–8—continued

Table 4–8—continued

Applicable alternative	Article	Requirement
		<ul style="list-style-type: none"> ● During shipment, no other regulated articles (except solid wood packing materials for raw lumber) are permitted in the same holds or sealed containers with logs/raw lumber, unless the other regulated articles have been heat treated or fumigated. ● Upon arrival, logs must be kept segregated from other regulated articles and moved to a processing facility operating under an APHIS compliance agreement as swiftly and directly as reasonably possible after arrival. ● All logs or products from logs must be heat treated or heat treated with moisture reduction within 60 days of their release from the port of first arrival; raw lumber from imported logs must be treated within 30 days of release from port of first arrival. ● All products and waste from processed logs must be burned or heat treated or receive other processing that will destroy any plant pest that may be associated with it. ● Sawdust, wood chips, and waste are prohibited for composting or use as mulch unless articles are fumigated or heat treated. Prior to treatment, such items may be moved only in an enclosed truck and only to another facility operating under a compliance agreement.
2	Tropical hardwood logs and lumber (debarked)	<ul style="list-style-type: none"> ● Eligible for importation.
2, 3, 4	Tropical hardwood logs (not debarked)	<ul style="list-style-type: none"> ● Must be fumigated prior to importation.
2	Tropical hardwood logs (not debarked, small lots)	<ul style="list-style-type: none"> ● Eligible for importation if in lots of 15 or fewer logs (except not into Hawaii, Puerto Rico, or the Virgin Islands).
2, 3, 4	Temperate hardwood logs and lumber	<ul style="list-style-type: none"> ● Must be fumigated. However, wood from places in Asia east of 60° East Longitude and north of the Tropic of Cancer is ineligible for import unless permitted under universal importation requirements.
2	Articles associated with only tropical climate pests	<ul style="list-style-type: none"> ● Can only be imported to continental United States. ● Must not be imported to any tropical or subtropical areas of the United States as specified on permit.

Table 4–9. Universal Importation Requirements

Applicable alternative	Article	Requirement
2, 3, 4	Logs (softwood)	<ul style="list-style-type: none"> ● Prior to importation, they must be debarked and heat treated. ● During the entire interval between treatment and export, logs must be handled and stored to exclude pest access to them.
2, 3, 4	Lumber (heat treated or heat treated with moisture reduction)	<ul style="list-style-type: none"> ● During shipment, lumber must be segregated from all other regulated articles (except solid wood packing materials) in separate holds or separate sealed containers unless all regulated articles also have been heat treated (either with or without moisture reduction). ● Lumber on a vessel's deck must be in a sealed container unless it has been heat treated with moisture reduction. ● The treatment used must be stated in the importer document or permanently marked on each piece of lumber.
2, 3, 4	Lumber (raw)	<ul style="list-style-type: none"> ● Any raw lumber (including associated solid wood packing material) from those places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer is ineligible for import. ● No other regulated article other than packing materials may be on the same means of conveyance with raw lumber unless the raw lumber and other regulated articles are in separate holds or separate sealed containers. ● Raw lumber on a vessel's deck must be in sealed containers. ● All raw lumber imported must be consigned to a facility operating under an APHIS compliance agreement, must be heat treated (either with or without moisture reduction) within 30 days of import, and must be heat treated prior to any processing.
2, 3, 4	Wood chips/ bark chips	<ul style="list-style-type: none"> ● Wood or bark chips from Asian countries that are wholly or partially east of 60° East Longitude and north of the Tropic of Cancer are ineligible for import. ● The importer document must certify that the chips are from live, healthy tropical species of plantation-grown trees grown in the tropics or have been fumigated with methyl bromide or have been heat treated. ● Must be free from rot or accompanied by importer document certifying fumigation with methyl bromide or heat treatment.

Table 4–9—continued

Table 4–9—continued

Applicable alternative	Article	Requirement
		<ul style="list-style-type: none"> During shipment, no other regulated articles other than solid wood packing materials are permitted in holds or sealed containers with chips. Chips on a vessel's deck must be in a sealed container (certain specified exceptions are permitted). All imported chips must be consigned to a facility operating under an APHIS compliance agreement and must be burned, heat treated, or processed within 30 days of arrival at the facility.
2, 3, 4	Wood imported for mulch, humus, compost, and litter	<ul style="list-style-type: none"> Prior to importation, must be fumigated or heat treated.
2	Cork bark	<ul style="list-style-type: none"> Must be free of rot.
3, 4	Cork bark	<ul style="list-style-type: none"> Must be fumigated or heat treated.

Table 4–10. Requirements for General Permits

Applicable alternative	Article	Requirement
2, 3, 4	Articles from Canada and Mexico	<ul style="list-style-type: none"> If from Mexico, they must be from a state adjacent to the United States. Must be accompanied by importer document stating the origin of the articles is Canada or border states of Mexico and the articles have not been moved outside of this area. Cannot be from subfamily Aurantioideae, Rutoideae, or Toddalioideae of family Rutaceae.
2, 4	Solid wood packing materials (free of bark, used with nonregulated articles)	<ul style="list-style-type: none"> Must be totally free of bark. Must be apparently free of live plant pests.
2, 4	Solid wood packing materials (free of bark, used with regulated articles)	<ul style="list-style-type: none"> Must be totally free of bark. Must be apparently free of live plant pests.
2, 4	Solid wood packing materials (not free of bark)	<ul style="list-style-type: none"> Must be certified as heat treated, fumigated, or treated with preservatives.

Table 4–10—continued

Table 4–10—continued

Applicable alternative	Article	Requirement
2, 4	Loose wood packing materials (in use or imported as cargo)	<ul style="list-style-type: none"> • Must be dry.
2	Bamboo timber	<ul style="list-style-type: none"> • Must be free of leaves and seeds. • Must be sawn or split lengthwise. • Must be dried.
2	Articles previously issued specific permits	<ul style="list-style-type: none"> • Must present negligible pest risk (e.g., sea drift wood).

2. Summary of Pest Prevention Methods

APHIS has identified a number of methods that could be used either alone or in combination to prevent the introduction of plant pests to the United States. These prevention methods are briefly explained and then discussed relative to a hypothetical example to demonstrate how they could be applied under the various alternatives. A more complete discussion of these methods, their application, and risks is contained in this SEIS in chapter IV, sections A and B, and in the EIS in chapter III, section G.

a. Permitting and Certification

Establishing a comprehensive yet workable permitting system is an effective step to prevent pest introductions. A permitting system is used to identify, track, and follow up on imported items. It informs inspectors of the contents of the shipments, the origin and destination of the items in the shipments, the parties responsible for the shipments, and the treatment and handling of the items in the shipments. Treatment facilities can also be certified to ensure they meet APHIS standards.

b. Handling Procedures

Upon harvesting and during shipment, numerous handling procedures are available that can be used alone or in combination to minimize plant infestation and reinfestation of wood. These procedures include—

- limiting exports to saw quality logs only, which greatly reduces the probability of having infested logs in the first place,
- segregating logs from potential sources of pests to prevent the opportunity for an infestation or reinfestation,
- shipping wood within a short time of harvest so as to reduce the postharvest time during which wood could become infested, and
- treating wood products in order to avoid infestation or reinfestation.

c. Inspection

In addition to verifying the permitting and certification paperwork and checking the paperwork against the shipment to help assure compliance, inspection is the process of visually and physically checking regulated articles for signs of obvious pest infestation at the port of first arrival. The level of inspection can vary from a small sample to 100 percent of a shipment depending upon the articles, country of origin, and other parameters. At least three benefits are gained by the inspection process—

- It provides information regarding the success of the permit process.
- It provides an opportunity to verify the efficacy of any treatments required prior to entry of the regulated article.
- It allows an opportunity to prevent entry of plant pest species into the United States (by treating, destroying, or refusing entry of infested articles) should pests be discovered.

Inspection is an effective monitoring tool while also providing some level of pest mitigation.

d. Cooperative Efforts

APHIS maintains cooperative efforts at the international, Federal, State, and local levels, which involve permitting, compliance, enforcement, and monitoring, as well as scientific research and education. Recent multilateral trade agreements (such as the North American Free Trade Agreement and the General Agreement on Tariffs and Trade) provide for the use of sanitary and phytosanitary (related to animal and plant health) measures and the development of international pest-risk standards in order to limit the introduction of foreign pests and pathogens.

e. Debarking

Plant pests or indications of their presence are often found in or immediately under the bark of trees. Debarking is the process of removal of bark from logs and other regulated wood articles, such as dunnage. Debarking is usually a mechanical process; however, less sophisticated methods might be used in less-developed countries.

f. Fumigation

Fumigation is a treatment method that involves using the gaseous phase of a chemical to kill a variety of plant pests found on and within wood and wood articles. While methyl bromide is the most commonly used fumigant, phosphine

and sulfuryl fluoride are chemicals that also are approved for fumigation. The process requires the introduction of the fumigant in a gaseous form into a chamber, under a tarp, or in the hold of a ship under controlled conditions.

g. Heat Treatment

Heat treatment consists of either raising and maintaining the internal temperature of the wood to 71.1 °C for a minimum of 75 minutes or kiln drying in accordance with the Dry Kiln Operators Manual. The methods used involve monitoring core temperatures and may or may not involve moisture reduction in the wood article.

h. Pesticide and Preservative Treatments

Pesticide and preservative treatments of logs, lumber, and other unmanufactured wood articles involve the application of chemicals to regulated articles to prevent plant pest infestation or reinfestation after other treatments. In some quarantine cases, the treatments are done to eliminate pests that are present. The chemicals may be applied as surface chemical treatments, penetrating dips, or fumigants.

i. Enforcement and Monitoring

Beyond cooperative and educational efforts, the risks and costs of not complying must be sufficiently high to strongly discourage potential violations of the law and its requirements. APHIS resolved approximately 600 enforcement actions in 1996. APHIS informs importers and shippers of the potential for civil penalties, criminal fines, jail sentences, and loss of revenue associated with filing inaccurate or fraudulent documents or failing to comply with the regulation. Importers and shippers also may be liable for other legal actions brought by other individuals or groups if they fail to comply with the law. Finally, APHIS monitors more closely those commodities which come from countries that are less likely to meet U.S. import requirements. Yet, it is realized that even the most strict enforcement cannot completely prevent attempts to violate the law or otherwise circumvent requirements.

j. Other Potential Prevention Methods

Following are two prevention methods that may have potential future application. Although at this time, because of limitation of equipment, costs, logistics, or damage to wood, they do not currently appear to be practical methods.

(1) Shipboard Heat Treatment

This method involves heat treating logs in the holds aboard ships during their voyage to the United States. The patented design for this method has not yet been built and is therefore not available for further testing.

(2) Irradiation

Irradiation, either by microwave, gamma, or electron beam irradiation, could be used to kill pests either directly or indirectly by raising the temperature of wood. Further research is being conducted to determine effectiveness, cost, and safety of these irradiation measures.

3. Example Shipment of Wood Products

In order to help the reader better understand how the previous ten pest prevention methods might be used in combinations under each of our six alternatives, the SEIS presents a hypothetical example. A ship from a temperate South American country is arriving at a U.S. port. It has a combination of manufactured and unmanufactured wood articles as follows:

Unmanufactured items:	temperate hardwood logs (debarked)
	softwood lumber
	wooden pallets (free of bark and used with the lumber)
Manufactured items:	wooden chairs

The following table demonstrates how this particular shipment would be handled under each of the alternatives. Keep in mind that this is only one example and is intended to be neither a comprehensive discussion of each of the prevention methods and its effectiveness nor the exact combination of applications.

Table 4–11. Example Shipment of Wood Products Under Each Alternative

Alternative	Action
1	All of the wood articles in this shipment would be allowed entry into the United States. None of the wood products would require treatment. If, prior to shipping, the importer voluntarily treated the logs, lumber, and/or packing materials, there would be no restrictions on the types of pesticides used, and the importer could use pesticides that are banned in the United States. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests.
2	A permit must be issued by APHIS for the lumber and wooden pallets that are 100% free of bark and the logs prior to their arrival at the U.S. port, unless they meet the requirement of a general permit, as outlined in table 4–9. The chairs, as manufactured wood products, would not require a permit. If the logs, lumber, and packing materials have been heat treated, there would be no restrictions on their entry into the United States, providing the importer has an import document or certificate accompanying them that verifies that the conditions of the APHIS regulation have been met. The logs, if segregated during shipment, would be allowed if fumigated. Lumber must be heat treated and kept segregated from other wood products prior to arrival in the United States; in this case no sawmill compliance is needed. Or, if lumber is not heat treated prior to arrival, the lumber must go to a saw mill, having a compliance agreement, within 30 days of arrival and be heat treated. The wooden pallets must be 100% free of bark or heat treated, fumigated, or treated with preservatives. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests. If plant pests were found by inspectors, APHIS could either refuse entry, require treatment of the entire shipment, or destroy infested articles.
3	All of the logs and lumber would have to be treated. The wooden pallets would not be regulated or require treatment; they could be in the same holds with the treated logs and/or lumber. The chairs would not be regulated. Because the packing materials do not require treatment, it is possible that the logs and/or lumber could become infested with plant pests if those plant pests were present on the wooden pallets. Lumber and wood pallets need not be 100% free of bark. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests. If plant pests were found by inspectors, APHIS could either refuse entry, require treatment of the entire shipment, or destroy infested articles.
4	All the articles except the chairs would have to be treated. Treatments would probably include heat treatment or fumigation. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests. If plant pests were found by inspectors, APHIS could either refuse entry, require treatment of the entire shipment, or destroy infested articles.
5	The logs and lumber in this shipment would be refused entry because they are unmanufactured wood products. The chairs would be allowed entry, as would the packing materials, which are unregulated. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests. If plant pests were found by inspectors, APHIS could either refuse entry, require treatment of the entire shipment, or destroy infested articles.

*Table 4-11—continued**IV. Environmental Analysis*

Table 4-11—continued

Alternative	Action
6	All of the wood products, except the chairs, would be refused entry. Upon arrival, the shipment would be subject to inspection to verify the paperwork and search for quarantine pests. If plant pests were found by inspectors, APHIS could either refuse entry, require treatment of the entire shipment, or destroy infested articles.

4. Summary of Environmental Consequences of Alternatives

The CEQ regulations implementing NEPA state that alternatives are the heart of an EIS (40 CFR 1502.14). In order for the public and an agency to make informed decisions regarding the environmental consequences of various alternatives, the alternatives must be distinct and comparable. One of the deficiencies identified by the court in the EIS was an inadequate comparison of alternatives. The court found that APHIS oversimplified the discussion of the environmental consequences of the alternatives and consequently obscured the differences among the environmental impacts of the various alternatives.

In order to address this deficiency, the SEIS presents a matrix (fig. 2), which provides a relative ranking of the six alternatives with regard to both their ability to exclude pests and their environmental consequences. The alternative that most effectively excludes pests is ranked as a “1” while the alternative that is least effective at pest exclusion is ranked as a “6.” Similarly, the alternative that causes the least impact within a resource category (such as Human Health) is ranked as a “1” and the alternative with the largest impact in a category is ranked as a “6.” This matrix allows the reader to contrast the alternatives relative to their ability to exclude pests and their environmental consequences.

This matrix is not intended to be a quantitative measurement of risk. Uncertainties are identified in the matrix and further explained in the following section (5). They can affect, to varying degrees, both the effectiveness and impact severity of the alternatives. Therefore, the rankings are relative and subject to professional judgment. For example, because international trade is dynamic, visualizing or predicting the impacts of new regulatory requirements is not clear-cut.

Because the matrix reflects the results of a relative ranking of alternatives and not a numerical measurement, the columns cannot be averaged to provide an overall ranking of the alternatives. The categories are not on equal scales, and the degree of differences among the alternatives within those scales are not equal.

Figure 2—Relative Ranking of Alternatives With Regard to Their Ability to Exclude Pests and Their Environmental Consequences
(1 = Greatest pest exclusion and lowest likely impact. 6 = Least pest exclusion and greatest likely impact.)

Sources of Uncertainty	Efficacy of mitigation methods; source of wood; size of shipments; number of shipments; wood market conditions; accuracy of risk assessments; human error; compliance; smuggling; biological and ecological information, etc.					
	Alternative 1 No Action	Alternative 2 Wood Import Regulation (Preferred Alternative)	Alternative 3 Prohibit Importation of Untreated Wood Except Packing Materials	Alternative 4 Prohibit Importation of Untreated Wood	Alternative 5 Prohibit Importation of Unmanufactured Wood Except Packing Materials	Alternative 6 Prohibit Importation of Unmanufactured Wood
Ability to Exclude Pests	6	3	5	2	4	1
Human Health	5	3	6	2	4	1
Forest Resources	6	3	5	2	4	1
Biodiversity	6	3 ¹	5	2	4	1
Ozone (MB use) ²	3	4	5	1	2	1
Global Climate Change	6	3	5	2	4	1
Cultural Resources	6	3	5	2	4	1
E & T Species	6	3	5	2	4	1

¹ Alternative 2 relies on pest risk assessments to set treatment requirements for imported wood products. Plantation-grown trees present lower plant pest risks, and the adoption of this alternative might encourage the use of plantations, which might decrease the logging of wild forests. If this assumption is true, this matrix, therefore, might understate the protectiveness of alternative 2 for biodiversity. This is discussed further in section 3 of this chapter.

² There are only five values in this comparison because neither alternative 4 nor 6 uses methyl bromide (MB) for treatment of wood products.

For instance, in any category, an alternative with a ranking of “1” merely indicates that it is the alternative likely to have the smallest environmental impact on that resource area, and the alternative with a ranking of “6” is the one likely to have the largest environmental impact. In addition, not all categories are based on measurable harm (e.g., defoliation of X acres of trees or use of Y tons of chemicals), and therefore require the use of best professional judgment.

The key value of these comparisons of alternatives is to demonstrate the highest, lowest, and moderate levels of impacts. Whether an alternative that is ranked a “3” for a resource area is in fact superior to an alternative ranked a “4” is subject to interpretation. However, the matrix helps to compare and contrast the alternatives and focus on their relative effectiveness and impacts.

Should exotic plant pests be inadvertently introduced into the United States, any programs that APHIS may initiate to eradicate them would include environmental analyses specific to the contemplated program. Those analyses would identify mitigation measures that could be incorporated into the specific program to lessen the impacts on human health and the environment.

5. Individual Ranking of Environmental Consequences of Alternatives

a. Sources of Uncertainty

Some of the major sources of uncertainty surrounding the wood import regulation and the NEPA analysis include—

- efficacy of mitigation methods,
- source of wood,
- size of shipments,
- number of shipments,
- wood market conditions,
- accuracy of risk assessments,
- human error,
- compliance,
- smuggling, and
- biological and ecological information.

It is important to keep in mind that all predictions of future actions and their potential implications and impacts contain a degree of uncertainty. The uncertainty can be reduced as more information and experience are available. One way to obtain more information regarding the effectiveness of the wood import regulation to exclude pests from the United States would be to monitor the movement of unmanufactured wood articles into the country and assess whether any pests become established as a result of those actions. Such monitoring would be appropriate in light of section 1505.3 of the NEPA implementing regulations. A monitoring system which makes maximum use of

existing procedures, mechanisms, and protocols would help assess the effectiveness of the regulation.

For example, in trying to determine how international markets might respond to regulatory restrictions imposed by alternative 2, we may be confronted with the following questions: Will this lead to less cutting of natural forests? Or more cutting from plantations? Or merely an increase in the price for plantation-grown trees? If the plantations are expanded to meet increased demand, will their expansion involve the cutting of more forests thereby lowering biodiversity or the planting of trees on previously deforested land thereby increasing biodiversity? All of these possibilities are real, but their probabilities are difficult to predict.

b. Ability to Exclude Pests

It is impossible to precisely predict potential plant pest introduction and establishment from the importation of wood articles into the United States or the consequences of a pest infestation. However, based on past experiences, establishment of exotic plant pests can have devastating consequences on U.S. forest health, which in turn affects biodiversity, species composition and survival, and other resources such as recreation areas and historic properties (see chapter 1, B. Historical Perspectives). Pest eradication is costly, both in monetary terms and in potential human and ecological health impacts from the use of some control measures, such as pesticides. While providing a measure of pest control, eradication activities, if even attempted, rarely have been effective either in reversing the damage caused by the establishment of an exotic forest pest or in eradicating an established exotic forest pest.

The no action alternative (alternative 1) presents a greater potential for the introduction and establishment of plant pests than the other alternatives. Under alternative 1, importers are not required to treat wood articles, and, if they do treat wood products, they could use pesticides that are banned in the United States. Also, under alternative 1, APHIS could not prohibit timber shipments from countries with a high risk of pest infestation. In fact, these problems prompted the promulgation of the regulation to exclude potential plant pests on wood articles. The other alternatives are ranked based on the comprehensiveness of their restrictions on importation of wood articles. For example, alternative 6, which excludes importation of any unmanufactured wood articles, is the most restrictive and, therefore, appears to be the most protective alternative analyzed in the EIS. Alternatives 4 and 2 are the next most protective because both include restrictions on all types of wood articles. Alternative 4 is more protective than alternative 2 because it prohibits the importation of all untreated wood. Alternative 5 prohibits the importation of all unmanufactured wood products (e.g., logs and lumber) but allows unregulated

entry of wood packing materials, which is a more likely pathway for the introduction of plant pests. Therefore, it is less protective than alternatives 2, 4, and 6. Alternative 3 allows the importation of packing materials and treated wood. It was deemed less effective at excluding pests than alternatives 2, 4, 5, and 6 because of the threat from unregulated packing materials.

c. Human Health

The potential impacts to human health resulting from each of the alternatives are related to the use of and exposure to pesticides, preservatives, chemicals, and fumigants used to treat wood articles before they are allowed to enter the United States. Human health also could be impacted by control strategies that result in exposure to pesticides (and dangers associated with their application) used to control introduced pests. See the section on Human Health Effects From Past Pest Introductions in the United States (chapter 4, B.3.b.) for additional discussion.

The rankings relative to human health displayed in figure 2 represent two factors that are potential indicators of human health impacts as follows:

- First, the use of methyl bromide in metric tons and percent changes in ozone depletion, which were estimated in the EIS and are displayed in table 4–12 below. The estimates ranged from 0 for alternatives 4 and 6, to 8.5 metric tons of methyl bromide for alternative 3. Similarly, the percent change in ozone depletion ranged from -0.000042 for alternatives 4 and 6, to +0.000096 for alternative 3.

Methyl bromide use was used as an indicator of potential applications of other treatment chemicals used, such as pesticides and preservatives as well as other chemicals that may be used instead of methyl bromide. Methyl bromide is currently the most commonly used fumigant, and information is available regarding methyl bromide usage.

- Second, the “Ability to Exclude Pests” was assumed to be directly correlated with the need to initiate pest control programs in the United States. Associated potential risks are to the public and workers as a result of exposures to pesticides that may be used in any control, management, or eradication programs for introduced pests.

Table 4–12. Alternatives and Methyl Bromide Use

Alternative	Ranking	Total methyl bromide use (in metric tons) ^a	Percent change in ozone depletion ^b
1	3	2.6	0
2	4	5.4	+0.000042
3	5	8.5	+0.000096
4	1	0	-0.000042
5	2	1.7	-0.000012
6	1	0	-0.000042

^a Based on 1990 imports from all sources except Canada and Mexico and imports from New Zealand and Chile. Data for actual methyl bromide use is for alternative 1 (the no action alternative).

^b Assuming that anthropogenic methyl bromide emissions account for 10 percent of the yearly global ozone loss.

Alternatives, such as 6 and 4, that were considered to be the best at excluding pests were assumed to have reduced risks of exposing the U.S. public and applicators to pesticides and their potential associated health risks. Whereas, alternatives 1 and 3, which were considered less effective at excluding pests, were deemed to have higher associated human health risks.

The Human Health rankings of the alternatives are the result of using professional judgment to integrate the data on methyl bromide use and ozone depletion with the rankings of each alternative relative to their effectiveness at excluding pests from the United States. For example, alternatives 6 and 4, which were the best at excluding pests (with rankings of 1 and 2 respectively) and used no methyl bromide, were viewed as presenting the least human health risk. Alternative 3, which was determined to be the second worst alternative (with a ranking of 5) relative to pest exclusion and used the most methyl bromide, was judged to have the highest potential risk to human health. Alternative 1 was considered the least effective at excluding pests (ranking of 6) but had a moderate level of methyl bromide use. It was deemed to have the second greatest potential risk to human health because it was so ineffective at excluding pests, and therefore would require the greatest use of pesticides for associated potential control programs in the United States. Alternatives 2 and 5 were judged to be more effective at excluding pests (with relative rankings of 3 and 4 respectively) and used 5.4 and 1.7 tons of methyl bromide respectively. Although alternative 2 used over 3 times the amount of methyl bromide as alternative 5, it was judged to pose slightly less overall risk to human health than alternative 5 because of its greater effectiveness at pest exclusion and lower use of pesticides.

d. Forest Resources

Total forested areas in the United States encompass over 740 million acres or about one-third of the Nation's total land area. Forested areas within the United States also continue their ranges in Canada and northern Mexico.

Approximately 480 million acres of the forested areas are classified as timberland, i.e., it is capable of producing timber and has not been withdrawn from utilization by law.

Forest resources are important for many reasons, such as—

- water quality and quantity,
- air quality,
- biodiversity,
- timber and wood products,
- erosion control,
- fish and wildlife habitat,
- recreation,
- agriculture (fruits and nuts),
- medicinal and spiritual use, and
- overall quality of life.

While it is impossible to say how many plant pests have been or could be imported across national boundaries without becoming established in their new habitat, sufficient historic examples of exotic pests becoming major pests provide information to conclude that introduction of only a few organisms carries considerable risk. Chestnut blight, Dutch elm disease, white pine blister rust, and gypsy moths (see chapter 1, B. Historical Perspective) are a few of the introduced plant pests that have caused ecological and economic disruption in U.S. forests.

As can be seen in figure 2, the six alternatives considered in the EIS vary in their predicted effectiveness at excluding potential plant pests. The rankings of the effectiveness of each alternative and the discussion above in section b. (Ability to Exclude Pests) provide the basis for the rankings for each alternative relative to its potential impact to forest resources. Therefore, the ranking for each alternative is the same for forest resources as it is for its ability to exclude pests.

Potential impacts to forest resources are discussed in detail in the EIS (chapter 4, pages 52–60). Ecological effects of pest introductions could include changes in species composition, deforestation, habitat destruction, degradation of riparian and montane communities, enhanced fire potential due to increased fuel loading, alteration of biogeochemical cycles, and loss of biodiversity. In addition, there likely would be economic impacts from the loss or degradation

of forest resources due to pest introduction and establishment. These impacts include loss of timber resources, decreased tourism to forests and parks, damage to the fisheries industry from degraded water quality, cost of eradication of the introduced pest, control of forest fires, reforestation costs, and loss of property value.

e. Biodiversity

Biodiversity could be affected under the alternatives presented in the EIS in two principal ways: through the establishment of an exotic organism in North America and through harvesting of native forests overseas. The rankings presented in the matrix correspond to the ability to exclude pests.

Historically, the establishment of nonindigenous organisms has been shown in some cases to clearly reduce biodiversity in the affected ecosystem (OTA, 1993). Alternatives with the most stringent requirements on timber importation are the alternatives that afford the best protection against the establishment of exotic organisms and, therefore, better protect North American biodiversity.

The impact to native forests overseas are based on more complicated factors and therefore are more difficult to evaluate. Alternatives that restrict importation of wood articles will decrease the demand for foreign logs and lumber in the United States. This may lead to a decrease in wood harvesting in overseas forests in favor of increased logging of U.S. forests (USDA, APHIS, 1995). This situation may or may not have a lasting effect on logging in foreign forests since international markets fluctuate for a number of reasons, and the United States is only one of many markets for international timber.

As discussed in the EIS (pages 60–62) and noted in figure 2, the alternatives with the most restrictions on timber importation afford the best protection against the establishment of exotic pests and therefore better protect U.S. biodiversity.

Based on risk assessments conducted by the U.S. Forest Service (USDA, FS, 1991a, 1992a, 1993a), there appears to be a trend indicating that professionally managed plantations provide timber that is usually of a lower plant pest risk than timber harvested from unmanaged stands. If this trend continues, and alternative 2 (which bases importation on pest risk analysis) is adopted, then there would be a tendency to import more timber from plantation-grown trees than from trees harvested from wild forests. Harvesting plantation-grown trees would, under most circumstances, be expected to have less of an effect on biodiversity than the harvesting of forests, unless the naturally occurring forests are routinely cleared to be converted into plantations. Timber harvesting damages forest ecosystems by causing increases in erosion, fire susceptibility,

and access for farming, for example (TFW, 1990). Plantations generally would not contribute to this problem.

Edward Wilson (1992) maintained that in addition to protecting sensitive regions from ecologically unsound exploitation, we must promote sustainable development. Thomas Lovejoy, as chairman of the Tropical Forestry Workshop (TFW, 1990), promoted the philosophy of balancing economic and ecological issues when dealing with tropical forests. Sustainable forestry has the potential to maintain biodiversity, whereas exploitation of timber resources through such measures as slash and burn agriculture is extremely damaging to biodiversity in tropical forests. While none of the alternatives presented in the EIS will require either sustainable forestry or timber exploitation harvest methods, alternative 2 would encourage the use of plantation-grown trees and thus encourage sustainable forestry.

f. Ozone (Methyl Bromide Use)

Impacts to the ozone layer from the alternatives are directly related to the amounts of methyl bromide used. Methyl bromide is a chemical whose uses include fumigation of wood. It has been demonstrated to contribute to the depletion of the ozone layer, which protects the Earth's surface from the damaging effects of ultraviolet radiation from the sun. As such, methyl bromide production is regulated by EPA under the Clean Air Act.

The United States is currently responsible for approximately 43 percent of the global use and 50 percent of the global production of methyl bromide (FOE, 1992). Table 4–12 displays a rough estimate of the maximum use of methyl bromide for each of the alternatives and the estimated percent change in ozone depletion.

As shown in table 4–12, alternatives 4 and 6 use no methyl bromide. Therefore, they would reduce the current baseline. Alternative 5 would also involve methyl bromide reductions relative to the baseline and, therefore, will reduce the percent change in ozone depletion. Alternative 1 (the baseline alternative) would maintain the current baseline, thus resulting in no change in ozone depletion. Alternatives 2 and 3 both are estimated to use more methyl bromide (5.4 and 8.5 metric tons, respectively) than the baseline and will increase the percent change in ozone depletion.

Methyl bromide would be used under alternatives 1, 2, 3, and 5 not only to fumigate wood imports but also to fumigate wooden structures in the United States that might be infested by introduced pests. It is important to remember that logs coming from different geographic areas will require different

treatments and that those treatments will vary depending on the type of wood product under consideration.

It is important to note that, under current law, production and importation of methyl bromide into the United States will be terminated on January 1, 2001. Therefore, once existing stocks of methyl bromide in the United States are used, they will not be replenished and methyl bromide use for wood in the United States will eventually cease. Under the Montreal Protocol, the use and production of methyl bromide, however, can continue in those countries that are not considered to be developed. Therefore, methyl bromide use on wood is unlikely to cease, but will be reduced after January 1, 2001, if for no other reason than the fact that it will no longer be available for use domestically. However, even though methyl bromide use may continue overseas, it is unclear if currently available methyl bromide treatments that occur overseas still will be permitted under the wood import regulation.

g. Global Climate Change

The deforestation of large areas of timberland is thought by many scientists to contribute to increased levels of carbon dioxide (CO₂), a greenhouse gas, which may result in increased global warming. Deforestation would lead to fewer trees being available to take up CO₂ during the process of photosynthesis, resulting in higher CO₂ levels in the atmosphere.

Deforestation of large areas may contribute to global climate change, but the extent of logging for the purpose of importation into the United States is unlikely to be a significant factor. In the foreseeable future, the bulk of logs likely to be imported into this country under the wood import regulation will come from plantations, which are then replanted with trees. Logging of forests in Siberia (with 1.6 billion acres of forest (Cheater, 1991)) and Asia would have a great potential for contributing to global climate change because timber operations in these areas usually do not include reforestation. Importation of large quantities of logs and wood articles from these areas is expected to be minimal because of import requirements under the regulation, the high transportation costs associated with their location, and current lack of infrastructure to support massive harvest and treatment of logs.

The impacts to global climate change are inversely related to the restrictions on importation of logs. Therefore, those alternatives that are the most restrictive are least likely to cause deforestation of foreign forests in favor of harvest from tree plantations. Alternative 1, therefore, has the greatest potential to cause impacts, and alternative 6 has the least potential to cause impacts. However, none of the alternatives that impose restrictions (alternatives 2 through 6) have a high likelihood of affecting global climate change.

h. Cultural Resources

In promulgating the regulation on importation of logs, lumber, and unmanufactured wood products, APHIS considered the potential effects to cultural resources, as required by the National Historic Preservation Act and other laws and regulations. Protected cultural resources include historic properties, archeological sites, and sites of cultural significance.

Effects on cultural resources are tied to the potential for the introduction and establishment of plant pests. Historic buildings can be affected by the removal of plant pests and their droppings. Buildings could require repainting, and landscaping associated with the buildings could have to be removed or replaced after an infestation. Archeological sites could be indirectly affected by a pest infestation. Archeological sites could be exposed by erosion, increased water runoff, or fire. Depending on the type of infestation and its specific effects, all of these might be possible. Sites of cultural significance to Native Americans could also be affected by an infestation. The presence of pests could damage or decrease the aesthetic value of such places.

The EIS also looked at the potential for alternatives to affect recreational resources and landscaping. Impacts to these resources also are tied to the introduction and establishment of exotic plant pests, which affect plant foliage and vegetation selection. Areas infested with plant pests are less likely to attract recreational visitors, and those that continue to use areas infested by plant pests are likely to experience diminished recreational satisfaction. This effect is observed each year in areas affected by gypsy moth defoliation.

Landscaping is done to achieve a number of goals, including to provide visual, noise, or wind barriers; to provide shade; or create pleasant surroundings. The introduction of exotic plant pests can cause defoliation and reduction in plant health, which diminishes all of these goals as evidenced by the loss of elm trees throughout U.S. cities to Dutch elm disease.

Whether the potential losses are to recreational or landscaping resources or to historic properties or archeological resources, insect damage or erosion has associated economic and social costs to both the public and private sectors. The alternatives considered in the EIS vary in their predicted effectiveness at excluding potential plant pests. The discussion on pest exclusion, above, provides the basis for the rankings of environmental impacts for cultural resources.

i. Endangered and Threatened Species

The Endangered Species Act requires Federal agencies to determine if their actions are likely to have adverse effects on federally listed threatened or endangered species. APHIS, in consultation with the U.S. Fish and Wildlife Service, determined that the preferred alternative would not have an adverse effect on threatened or endangered species. In fact, the U.S. Fish and Wildlife Service agreed with APHIS that the greatest threat to listed species comes from no action, as the increased importation of wood articles from diverse countries presents a significant risk of plant pest introduction.

One of the factors facing native species is the introduction of exotic species, which may outcompete native species. As indicated by their status, listed species are particularly vulnerable. Actions that result in the prevention of the introduction of exotic species in the natural environment protect the listed species.

The U.S. Fish and Wildlife Service concluded that the treatment methods outlined in the proposed regulation (alternative 2) do not pose a threat to listed species. In a letter to APHIS (March 15, 1993), the U.S. Fish and Wildlife Service gave four reasons, quoted below, for their concurrence with APHIS' conclusion that threatened and/or endangered plants or animals would not be adversely affected by the preferred alternative:

- “1. All chemical treatments will be required to be applied in accordance with established Environmental Protection Agency (EPA) label directions and guidelines. This requirement will apply to such treatments applied overseas as well as in this country.
2. Only compounds registered by EPA for the intended use will be employed for fumigation, topical treatment, or other methods of application. The proposed rule does not offer or specify new compounds or untested procedures.
3. Disposal of unused treatment compounds in the U.S. will be conducted in accordance with established and approved EPA guidelines.
4. Any new compound proposed to be used for wood treatment would be reviewed for environmental risk (including possible impact on listed and proposed species) prior to registration. This office would be allowed the opportunity to comment prior to any such registration.”

It should be noted that other countries must follow import requirements under the regulation, and APHIS cannot enforce treatment application restrictions in foreign countries. While APHIS can request that other countries follow its standards, APHIS has no authority to enforce restrictions in foreign countries.

The alternatives considered in the EIS vary in their predicted effectiveness at excluding plant pests. The preceding discussion on plant pest exclusion provides the basis for the rankings of environmental impacts for threatened and endangered species.

D. Additional Updated Information

1. GAO Audit of Agricultural Inspection

The U.S. General Accounting Office (GAO) conducted a review to assess APHIS' effectiveness in minimizing the risks to agriculture from pests and diseases entering the United States (GAO, 1997). GAO identified recent developments that could challenge the ability of APHIS' Agricultural Quarantine Inspection (AQI) program to carry out its mission, reviewed APHIS' efforts to cope with these developments, and reviewed the effectiveness of the inspection program in keeping pace with workload changes. The report is based on work conducted at APHIS' headquarters in Washington, DC, two regional offices, and 12 of the 172 ports of entry where APHIS inspectors regularly inspect individuals and goods entering the United States. The Nation's three busiest ports of entry were included in the 12 examined by GAO.

The GAO report cited areas of concern regarding APHIS' need to (1) maintain minimum inspection standards in terms of the methods used to select samples from shipments chosen for inspection; (2) improve reliable workload data; (3) integrate a risk assessment factor into staffing allocation models; and (4) evaluate and assign inspection resources on a national basis as opposed to a regional basis. APHIS concurred with the recommendations and defined ongoing efforts to ensure inspection consistency and policy compliance by (1) targeting resources on higher-risk cargo, (2) establishing AQI specialist positions and port risk management teams to improve data quality, and (3) enhancing risk assessments, customer service, and the processing of passenger and cargo inspections.

APHIS' inspection workload has increased dramatically since 1990 because of growth in imports and exports, increased travel, and increased smuggling. Policy changes have exacerbated workload demands by increasing pressure to expedite the processing of passengers and cargo into the United States. APHIS has made a number of changes to its inspection program to respond to the demands of its growing workload. The agency shifted funds and staff away from other programs to the inspection program, broadened the range of

inspection techniques, and stepped up efforts to coordinate with the other Federal Inspection Service (FIS) agencies.

APHIS' funding and staffing levels for AQI activities have increased substantially by approximately 78 percent and 44 percent, respectively, from fiscal year 1990 to fiscal year 1996, strengthening the Nation's "first line of defense" against exotic pests and diseases. At the same time, according to USDA's Assistant Secretary for Marketing and Regulatory Programs, APHIS' effectiveness in the rapid detection of and response to new pest invasions has been compromised due to reduced funding and staffing allocations for domestic plant protection programs. The viability of U.S. agriculture, the Assistant Secretary observed, can only be preserved by maintaining an integrated safeguarding system that maintains an optimal balance of authorities, resources, and technologies (USDA, MRP, 1997).

Based on its own needs survey, which corresponded largely with findings contained in the GAO report, APHIS has taken several steps to make better use of its inspection resources. For example, to supplement the normal practice of performing visual inspections of selected cargo and baggage, APHIS has significantly expanded the use of alternative inspection practices, such as detector dogs and x-ray equipment. In addition, inspectors are periodically using inspection blitzes—highly intensive inspections of baggage or cargo—to augment their visual inspection of selected items. APHIS also is working with other FIS agencies to maximize inspection activities.

AQI is an important, but not the sole, component of APHIS' system for safeguarding plant and animal resources from exotic pests and diseases. Maximum effectiveness is achieved only when program components such as foreign source intervention, smuggling intervention, exotic plant pest detection, exotic pest incursion management, preclearance inspection, permit decisions, quarantine treatment, detection survey and eradication, and point of entry inspection (AQI) are combined into a comprehensive safeguarding system. This integration is essential to the reduction of pest risk to a negligible level. As such, AQI policies and procedures are best understood and implemented within this context.

AQI is the cornerstone to preventing the establishment of exotic pests and diseases in the United States. This program consists of more than 50 different inspection methods and technologies designed to prevent exotic plant and animal pests and diseases from entering and becoming established in the United States. The very nature of the program, which requires performing AQI inspections at more than 100 different ports of entry located throughout the United States and in foreign countries, considers national, regional, and local resources. Conditions such as climate, local agricultural production and host

susceptibility, secondary movement of international travelers, and continuously changing international trade and travel priorities have serious impacts on resources. National allocations of workforce to regions are based on qualitative assessments of risk. The Workload Accomplishment Data System (WADS) and AQI Results Monitoring Program will increase APHIS' ability to quantify those risks. APHIS is currently developing science-based pest-risk standards to comply with international trade agreements. These standards, based on risk assessments, form the foundation for changing inspection program procedures, including the frequency and intensity of inspections. In addition, APHIS has identified points of entry requiring additional staffing and is committed to staffing new points of entry as they arise.

In view of APHIS' role in preventing the introduction of plant pests, an ongoing need for a comprehensive inspection program is evident. APHIS continues to conduct risk analyses on both commodities and pathways that could provide a means for harmful pests and diseases to enter the country. Expansion of the AQI Results Monitoring Program will provide information on the relative risk associated with the entry of passengers and commodities into the United States. Additionally, as commodity entry is facilitated, improved inspection levels on higher risk commodities will be assessed. APHIS also will evaluate GAO's premise that smaller numbers of reliable inspections are preferable to a larger number of inspections that do not comply with inspection guidelines. APHIS is committed to continuing to improve its AQI program to reduce the threat of harmful pests while not unduly restricting trade.

Field personnel on local risk management teams, with input and guidance from regional and headquarters staff, will evaluate current inspection protocols to ensure that inspections performed in ports of entry are consistent with risk determinations and APHIS' national policy. To improve the data in WADS, APHIS plans to ensure that inspection program policies are consistently applied nationwide and that the data used in decisionmaking are accurate and reliable. The PPQ regions recently established AQI specialist positions to conduct program analysis and risk assessment. These AQI specialists are part of the National AQI Team, which assures that AQI policies are consistently applied nationwide and that the data used in decisionmaking are accurate and reliable. Quality control of the data is also necessary at ports of entry. Ports are beginning to establish local risk management teams. These teams will conduct local risk assessments and recommend options to manage identified risks. By using these data to make risk-based decisions at the port, all field personnel will be involved in improving the accuracy of WADS. APHIS is consolidating its four PPQ regions into two regions and believes that this will contribute significantly to achieving national consistency in the AQI program.

APHIS will continue to provide guidance to emphasize and reinforce the importance of using the best possible procedures for preventing pests from becoming established, and will ensure that the inspection standards are consistent with the risk determinations conducted through the AQI Results Monitoring Program.

The thrust of the GAO report was that port inspection as a sole line of defense has weaknesses that are difficult to overcome. This was precisely the reason that the wood import regulation was developed. The regulation has resulted in shifting our protection of native forests from exotic pests away from a single inspection at the port of arrival to a comprehensive approach where pest mitigation is ensured before entry into the United States. The use of a combination of complementary mitigation measures has been required, thus reducing reliance upon inspection from the sole method of protection to a partial role that also serves as a monitoring tool to evaluate the effectiveness of the regulation. The regulatory approach used for wood imports was developed because APHIS was aware of the limitations of port-of-arrival inspection as later pointed out in the GAO report.

2. Suppression/ Eradication Strategies

The primary intent of the wood import regulation is to exclude exotic pests of forests and wood articles. Exclusion is the most effective technique for preventing new infestations of plant pests. There is, however, always the possibility that forest pests may be inadvertently established despite agency actions designed to prevent this. APHIS has prepared descriptions of “Pests not known to occur in the United States.” If any of these pests or other pests are detected in the United States, APHIS organizes a New Pest Advisory Group to assess the pest risks and to prepare an action plan that sets out control options for dealing with the new pest. The group may be responding to a new species (e.g., Asian long-horned beetle) or to a new subspecies (e.g., Asian gypsy moth). The participants in the advisory group usually include experts from the U.S. Forest Service, various interested State agencies, and academia. Agency actions in response to the introduction of new pest species include no action, suppression, and eradication. No action is generally taken for conditions where pest risk is insignificant or where agency actions could not contribute to elimination of the pest risk. Suppression is selected when eradication is infeasible and taking no action is inappropriate. Eradication is selected for conditions where feasible and where the pest risk justifies the expenses of eradication. Agency actions against introduced pest species may take the form of suppression or eradication strategies.

While it is preferable to exclude pest species from introduction, as APHIS regulations are intended to do, no strategy can be designed to completely eliminate the risk of inadvertent plant pest introductions. When establishments have occurred and control activities are desirable, there are general approaches

that can be taken. The selection of a suppression or eradication strategy depends upon the tools available to control and eliminate the introduced pest. The specific methods used against each pest must be designed for maximum effectiveness against that pest species. Because each species is unique in habits, habitat, and vulnerability, the particular problems and issues that relate to each species of forest pest are too varied and numerous to describe in detail. There are, however, some general strategies that pertain to certain types of forest pests.

Once it is determined that a control program is needed, documentation of the environmental consequences of the larger control programs may be achieved through the preparation of an environmental impact statement (e.g., Programmatic Gypsy Moth Management). Analysis and documentation of environmental consequences of smaller programs or site-specific agency actions for larger programs is generally presented in an environmental assessment (EA). The site-specific EA prepared for most programs provides the rationale used to select specific actions to achieve the desired control level with minimal adverse impacts. The rest of this section will address the general control strategies applicable to specific forest pest groups and the effectiveness of these control methods when used for suppression and eradication efforts.

a. Insect Pests

The strategies to control insect pests depend primarily on the insect species, their habitat requirements, their potential to damage trees and forests, their ability to spread, and their geographic distribution. The different combinations of biological and environmental factors make it necessary to take different approaches for control of each new and established pest species. Agency control programs are considered on a case-by-case basis with a comprehensive review of environmental impacts before selecting a specific control strategy. Efforts by APHIS and the U.S. Forest Service may determine that the insect has not become established (e.g., the spruce beetle, *Ips typographus*) and that no further action is necessary. If a pest has become established and has spread throughout its potential host range or no feasible control methods are available, then it may be decided that no agency action is the most appropriate approach. If there are feasible alternatives available to the agency, then each will be considered from the standpoint of effectiveness and environmental impacts. If the agency decides to take action against an insect pest, then an effort would be made to trace the source of the introduced insect pest. If it were imported via a wood commodity pathway, then a reevaluation of that pathway would be undertaken.

Species with potential to damage forests (e.g., gypsy moth in oak forests) may be controlled through eradication or suppression strategies. The eradication

efforts are often chosen for small isolated infestations. The suppression efforts generally are chosen for sites where the pest is well established, the pest population is expected to cause substantial damage, and eradication is not feasible. A modification of the suppression strategy which was developed for use against gypsy moth, but that may be applicable to other forest insects, is the slow-the-spread strategy. Slow-the-spread programs occur on the geographic edges of an expanding infestation with the intent of minimizing damage as the pest's distribution expands. All control programs that are developed depend upon an integrated pest management approach. For example, a site-specific gypsy moth program may use trapping, biological control agents, chemical control agents, mating disruption, sterile insect technique, regulatory controls, and physical controls (USDA, FS and APHIS, 1995a). Mechanical and silvicultural practices may be effective in some suppression programs. Selective removal of infested trees, trapping, weeding, thinning, pruning, and prescribed burning have been shown to effectively control some insect pests (Graham, 1979).

The control of some wood insects may be difficult because control actions may not be feasible for all life stages. For example, small infestations of wood-boring insects may be controlled by cutting and destroying all infested trees (e.g., Asian long-horned beetle in New York). Chemical control for these woodborers is only effective during a short period of time when the adults are active. Systemic chemicals may be used for some wood-boring species, but the environmental impacts of more persistent chemicals would have to be considered carefully in an environmental assessment before their use. Planting of genetically resistant strains of the host plant is one option that may be considered when eradication of the pest is not a feasible option (Speight and Wainhouse, 1989).

Some forest insect pests are known to "hitchhike" on common carriers such as public transportation (e.g., Japanese beetle). Treatment of the public airlines with a knockdown agent and contact insecticide prior to flights has been shown to effectively prevent this.

Some insect pests spread slowly and may be best contained by a limited control program where the trapping has detected the insect pest (e.g., pine shoot beetle). These programs require adherence to trapping and treatment schedules if the wood articles are to be moved outside the regulated areas. The use of repellants and anti-feedant compounds may be applicable to some of these pest situations (Speight and Wainhouse, 1989).

b. Fungal Pests

Agency programs for suppression or eradication of fungal pathogens may be implemented when infestations are detected. The suppression or eradication of introduced pathogenic fungi can be difficult and cumbersome. The suppression program of Dutch elm disease conducted by the U.S. Forest Service was intended to reduce damage and prevent spread of the pathogenic fungus. The ability of the U.S. Forest Service to control this fungus was limited to treatments for the insect vector and elimination of infested trees. The vector and fungus were already well established before the program began. Early detection of fungal pests may allow an agency the opportunity to identify, cut, and destroy all infected trees, but this only would be effective for small infestations. The biology of the fungus determines its rate of spread. Insecticide treatment of trees may be effective for suppression or eradication if the introduced pathogenic fungi are transmitted to other hosts primarily by an insect vector. Fungicide treatment of trees may be effective for suppression or eradication if the introduced pathogenic fungi are not readily dispersed by wind or other means. Some efforts could require use of both fungicides and insecticides. Epidemiologic tracing of the source of the pathogenic fungus inoculum would be necessary to ensure that additional infestation would not occur.

Detection of a newly introduced pathogenic fungus must be followed by an effort to delimit the geographical extent of the infestation. The agency must ensure that the fungal pathogens are not too widespread for an effective program. If the distribution at the time of detection is determined to be too broad for a successful program, then the agency may choose to attempt no regulatory actions (e.g., the introduction of Eurasian poplar leaf rust). If the introduced fungus is highly pathogenic and the spores are readily dispersed by wind, suppression by containment or eradication may not be effective actions. Selection of an agency action must be based upon the nature and distribution of the fungal pathogens.

c. Other Wood Pathogens

Other wood pathogens include some nematodes, bacteria, and viruses. Agency programs or actions will depend upon the specific pathogenic organism. The infested area must be delimited to determine the appropriate response. Some small or site-specific infestations could be handled through the cutting and destruction of the infested wood (e.g., Florida citrus canker infestations). Equipment used in these programs against bacterial pathogens is disinfected after use. Other infestations could be treated or contained through the use of pesticides. Fumigation may be required for eradication of site-specific infestations of nematodes. It may not be feasible to have program actions for

large or widespread infestations. As with other pest species, determining the initial source of introduction of the pathogens would be required, as well as treatment or destruction of the wood that was determined to be the source of infestation.

3. Methyl Bromide Use

The Montreal Protocol is an international agreement that governs the production and use of ozone-depleting chemicals. It was developed in response to evidence that manmade substances, particularly chlorofluorocarbons (CFC's), were damaging the ozone layer. The ozone layer is a concentration of ozone in the earth's stratosphere (the layer of the atmosphere that extends from 7 to 30 miles above the Earth's surface). Its presence protects the Earth's surface from excessive ultraviolet radiation. Under the Montreal Protocol, developed countries have agreed to limit and ultimately phase out production and use of ozone-depleting substances.

Methyl bromide is listed as an ozone-depleting substance under the Montreal Protocol. Accordingly, a reduction and phaseout schedule for methyl bromide production in industrial countries has been established, and production in developing countries will be frozen. The Montreal Protocol, however, maintains an exemption to the restrictions on methyl bromide for quarantine use. It also allows for a critical agricultural-use exemption. These exemptions are intended to be used when no alternative to methyl bromide is available to maintain phytosanitary standards and agricultural production.

In the United States, methyl bromide is regulated under the Clean Air Act (CAA), which is administered by the U.S. Environmental Protection Agency (EPA). In 1993, EPA finalized a rule that classified methyl bromide as a Class I substance (one having a high potential for destroying stratospheric ozone). The CAA classifies ozone-depleting substances into two classes. Production and use of Class I substances (such as methyl bromide) are scheduled to be phased out over a 7-year period, and Class II substances are scheduled to be phased out over a 30-year period.

According to the CAA regulations, production and importation of methyl bromide will be terminated by January 1, 2001. Unlike the Montreal Protocol, there are no phytosanitary exemptions under the CAA. Therefore, methyl bromide use in the United States for any purpose will be reduced to zero as supplies dwindle after January 1, 2001.

Methyl bromide currently is the only fumigant approved for use in meeting the wood import requirements. Despite the fact that international treaty (the Montreal Protocol) allows for exemptions for quarantine uses to the phaseout schedule of methyl bromide, the Clean Air Act prohibits the production and

importation of methyl bromide into the United States after January 1, 2001. Soon after that date the existing stocks of methyl bromide in the United States are likely to be exhausted and methyl bromide will no longer be available for quarantine uses in the United States. Domestic production of methyl bromide for any use after January 1, 2001, will require an administrative decision and/or a statutory change. At this time, it is unclear if currently available methyl bromide treatments that occur overseas still will be permitted under the wood import regulation. If methyl bromide is not available, importers will have two options: import wood articles under the universal import requirements (primarily heat treatment) or find another fumigant that can replace methyl bromide. Other fumigants that may be efficacious could be used, but only after they have been accepted by APHIS and the regulation has changed to accept their use.

APHIS records indicate that since the APHIS wood import regulation went into effect, there has been little change in the use of methyl bromide on such articles. Table 4–13 compares the amount of methyl bromide (in metric tons) used by APHIS during the 2 years before implementation of the wood import regulation in August 1995 and during the 2 years after adoption of the regulation. The lack of change in methyl bromide use may be surprising to some, but it may be explained by the reluctance of shippers and importers to invest time and energies in the face of the legal challenge to the regulation. Based on the interest shown by Chile, New Zealand, and the forest products industry, it is anticipated that the importation of logs, lumber, and other unmanufactured wood will escalate when the legal challenge is resolved.

Table 4–13. Amount (in Metric Tons) of Methyl Bromide Used to Fumigate Imports of Logs, Lumber, and Other Unmanufactured Wood Articles

Date	Fumigation of logs, lumber, and wood articles	Dunnage	Total
Before regulation:			
8/93–8/94	0.39	1.72	2.11
8/94–8/95	0.86	1.35	2.21
After regulation:			
8/95–8/96	0.81	1.46	2.27
8/96–8/97	1.09	0.82	1.91

4. New Methods and Techniques

a. Shipboard Heat Treatment

The technology for the heat treatment of logs has expanded since the original EIS was prepared. On the forefront of this technology is a proposal to heat treat logs in the holds aboard ships during the voyage to the United States.

APHIS has examined the engineering designs of the proposed treatment and has approved, in principle, this treatment method. This design is patented in the United States. However, at the current time, no prototype equipment has been constructed and no ocean vessel is equipped to test the feasibility of this design. When it is available, APHIS will examine and test any equipment constructed to heat treat logs in this manner.

b. Irradiation as a Potential Treatment Method

Irradiation is one of the methods discussed in the EIS for which APHIS continues to explore the possibility of further development. This section provides additional and updated information on irradiation as an alternative method of treating imported wood articles and addresses the potential human health impacts of using irradiation as a mitigation measure.

In the EIS for the importation of logs, lumber, and other unmanufactured wood articles (USDA, APHIS, 1994), gamma irradiation was mentioned as a potential treatment to prevent the introduction of exotic plant pest species on imported wood articles. However, because of its possible deleterious effect on wood articles, the cost involved in constructing gamma irradiation treatment facilities, and the need for efficacy data, it was noted that the method did not appear to be a feasible alternative for treating imported timber. Likewise, a similar treatment option, electron beam irradiation, was discussed as having the potential to be an effective treatment against a wide range of plant pests. Electron beam irradiation has been examined by Agriculture Canada for its feasibility as a possible treatment against New World pinewood nematode and wood-stain fungi. Unfortunately, similar obstacles—that is, limited information on the cost and logistics of setting up treatment facilities, and very little documentation of efficacy against insect pests and pathogens—prevented its practical employment for this purpose.

In the EIS (USDA, APHIS, 1994), it was noted that “[t]o date, gamma irradiation has been applied only to disinfect or disinfest such items as food products, pharmaceuticals, and medical devices.” Even so, previous programs considered irradiation treatment only on a case-by-case basis for each facility or commodity use pattern. Because it is advantageous to find alternative plant pest quarantine treatments due to the phaseout of methyl bromide use, the North American Plant Protection Organization (NAPPO) convened a colloquium to review the suitability of irradiation technology as an alternative quarantine treatment (NAPPO, 1995). In fact, guidelines developed for the use of irradiation as a phytosanitary treatment are available to provide information on policies, procedures, and requirements for the proper conduct of treatments and to maintain consistency of operations between agencies and countries (NAPPO, 1997).

Recently, APHIS proposed the use of irradiation as an additional regulatory treatment method for phytosanitary certification of some agricultural commodities (61 FR 24433, May 15, 1996) and prepared an environmental assessment (EA) (USDA, APHIS, 1997) to analyze the potential environmental impacts of using this option. The EA analyzed the human health and environmental impacts that may result from implementation of the proposed use of irradiation on agricultural commodities. Under this proposed use, the intended treated products are generally foodstuffs, and the required dosages are lower than those considered for wood. Therefore, it is inappropriate to infer efficacy data for logs and wood articles from available efficacy data on foodstuffs. However, because the processes would be similar, albeit with a lower dose, it may be reasonable to speculate from the EA the potential human health effects of using irradiation to treat wood articles. Under the circumstances where the commodities are food sources and therefore ingested, the human health issues relate to the potential exposure to not only radiation, but also the unique radiolytic products formed in the foodstuff from the process. For the purpose of this SEIS, wherein the radiation treatment would be applied to wood articles, only the potential exposure to radiation from the treatment facility is considered.

An EA prepared by the U.S. Department of Health and Human Services' Food and Drug Administration (FDA) determined that no adverse environmental effects are anticipated at food processing plants that are designed to irradiate fruits and vegetables (FDA, 1982). The Nuclear Regulatory Commission (NRC) has set stringent environmental protection requirements for any facilities that use radionuclide sources (10 CFR Parts 20, 30, 51, and 71). In addition, there are special carrier requirements for transport of hazardous materials (such as the radionuclides used at these facilities) set by the U.S. Department of Transportation (DOT). Any extraneous radiation from radionuclides are to be contained in industrial plants by shielding, as required by the NRC and the Bureau of Radiological Health at FDA. The risk of radiation exposure to workers would be expected to be very low with adherence to the required safety regulations. The irradiation facilities should pose no routine risks to the general public, and public health concerns would occur only in the unlikely event of a major accident at a facility. Many safeguards prevent such incidents. Proper design and operating procedures of commercial irradiators have been shown to operate without significant radiation risk to workers or the public (CH2M Hill, 1987).

Since the publication of the EIS in 1994, APHIS has been receptive to discussing any new data that would provide conclusive evidence that specific radiation dosages were effective against potential pests of wood articles, and that the process could be implemented successfully in a cost-effective manner. Although no new efficacy data have been published, Russian scientists have

conducted research and provided data in support of adopting a generic dose for treating raw logs. This information indicates that a dose of 7 kiloGrays (kGy) is sufficient to cause 100 percent mortality in insects, fungi, and nematodes in logs (Huettel, 1996). In addition, APHIS' PPQ has formed a science panel consisting of scientists from APHIS, the Agricultural Research Service, and the U.S. Forest Service to establish a research protocol, review data, and oversee the research effort toward a generic dose providing probit 9 mortality for all organisms of concern in logs from Russia. (Probit 9 mortality is a statistical estimation of 99.99683 percent mortality in a population of live organisms, corresponding to a survival rate of 32 individuals per million.) If approved, APHIS may propose that the treatment be included in the wood import regulation.

There have been no further advances in developing treatment facilities that would be logistically and economically feasible for treating large shipments of logs, lumber, and other unmanufactured wood articles. Therefore, even though the irradiation process presents negligible human health concerns and has been acknowledged to achieve plant pest mortality, because of the lack of definitive information on feasibility, APHIS is not prepared to alter the assessment of its potential for use from that which is in the previous EIS.

5. Summary of Pest Risk Assessment for Logs From Mexico

In 1996, APHIS asked the U.S. Forest Service to determine the pest risk of importing pine and Douglas-fir logs into the United States from Mexico. APHIS made this request because of an increased interest in importing Mexican pine and fir logs. In response to the APHIS request, the U.S. Forest Service established a team of forest experts and scientists to evaluate the risk of importing these softwood logs into the United States. The final document "Pest Risk Assessment of the Importation into the United States of Unprocessed *Pinus* and *Abies* Logs from Mexico" became available in February 1998. APHIS has appointed a Mexican Log Risk Management Team to evaluate the new information supplied by the risk assessment. Part of this team's mission is to reevaluate the Mexican border exemption that is currently in the wood import regulation. The conclusions from the pest risk assessment for logs from Mexico are excerpted in the following paragraphs.

"Several U.S. forest industries propose to import logs of *Pinus* and *Abies* for processing in various localities in the United States. Current regulations require that unprocessed logs from Mexican states that do not border the contiguous United States be debarked and heat treated to eliminate all pests (Title 7, CFR Part 319.40-6). However, a general permit was issued to import logs and other wood articles from Mexican states adjacent to the U.S. border (Title 7, CFR Part 319.40-3). There is little biological support for such a regulation because plant pests are not confined to political boundaries. Therefore, APHIS requested that

the Forest Service prepare a risk assessment that identifies the potential pine and fir pests throughout Mexico, estimates the probability of their entry on logs of these species into the U.S., and estimates the potential for these pests to establish and spread within the U.S. The pest risk assessment also evaluates the economic, environmental, social, and political consequences of the introduction. The assessment and conclusions are expected to be applicable to the entire United States.”

“There are numerous potential pest organisms found on both *Pinus* and *Abies* spp. in Mexico that have a high probability of being inadvertently introduced into the U.S. on unprocessed logs. Some of these organisms are attracted to recently harvested logs while others are affiliated with logs in a peripheral fashion but nonetheless pose serious threats to forest or agricultural hosts in the U.S. Thus, the potential mechanisms of log infestation by nonindigenous pests are complex. Further complicating the issue is the presence of many of the pests of potential concern in Mexican states immediately adjoining the U.S. For example, the following organisms with a moderate or high pest risk potential occur in one or several border states: the adelgids (*Pineus* spp.), La Grillea (*Pterophylla beltrani*), pine bark beetle (*Dendroctonus mexicanus*), pine engraver beetle (*Ips bonansea*), pitch moth (*Synanthedon cardinalis*), ambrosia beetle (*Gnathotrichus perniciosus*), organisms that cause assorted diseases, (e.g. *Sphaeropsis sapinea* and *Cronartium* spp.), and pine wood nematode (*Bursaphelenchus xylophilus*). Due to their size, and spatial configuration in some cases, these adjoining Mexican states have ecological and geographic features that do not resemble the bordering U.S. states. The shared border regions where the features are similar can be quite small. Current import regulations provide a general permit for unprocessed wood products from these border states. The issue of pests of concern in adjacent states of Mexico should be considered in any review of log import regulations.”

“The situation in Mexico has some important differences that distinguish it from the situations in New Zealand and Chile, where previous risk assessments have been done (USDA, FS, 1992a, 1993a). Plantation grown Monterey pine (*Pinus radiata*) is an exotic species in both Chile and New Zealand and is relatively free of insects and pathogens. In both Chile and New Zealand, there have been relatively few organisms that have demonstrated a capability of adapting to their new potential pine host, and many of the insects and pathogens associated with Monterey pine are ones introduced from the northern hemisphere. In Mexico, the heart of diversity for *Pinus* spp. in the world, the number of native organisms associated with pine is far

greater than that associated with pine in Chile and New Zealand. This inherent complexity of native pine forests in Mexico leads to more organisms with higher risk potentials than in Chile and New Zealand. Furthermore, an additional source of concern is that Mexico could have generic variants of species that already occur in both Mexico and the United States.”

“For those organisms of concern that are associated with Mexican pines and firs, specific phytosanitary measures may be required to ensure the quarantine safety of proposed importations.”

6. Information on Effectiveness of the Wood Import Regulation

For the most part, records of quarantine pest interceptions are based on pest interceptions found at the ports of entry by visual inspection by Plant Protection and Quarantine (PPQ) officers and should not be interpreted as the actual numbers of infested wood commodities which have entered the continental United States since the wood import regulation took effect in August 1995. Because solid wood packing material such as crating and dunnage are so ubiquitous, only a small number of shipments are actually physically examined at the port of entry. Log imports, on the other hand, are always examined in detail and the data more closely reflect the actual pest risk. Lumber and other wood products are also normally examined in detail, but usually not to the degree as log imports.

Hundreds of thousands of shipments of commodities containing wood products have entered the United States since the wood import regulation went into effect. Based on Plant Protection and Quarantine’s interception database, of the shipments that received physical inspection, approximately 500 were found to be infested with significant forest pests; however, none of the log shipments were found to be infested with significant exotic forest pests. Of the infested shipments, 97 percent were due to infested wood packing material. All infested shipments were either treated or refused entry.

APHIS believes that the interception records indicate where the greatest risk of plant pest introduction occurs and thus point out portions of the wood import regulation that may need to be revisited. Log importations under the current regulation present a negligible plant pest risk. According to APHIS’ pest data base, no log shipments have been found infested with exotic forest pests since the wood import regulation went into effect on August 23, 1995. Lumber imports also present a negligible plant pest risk, with the possible exception of lumber from the adjacent states in Mexico (as determined in the pest risk assessment for Mexico, discussed in previous section).

The interception records identify two pathways with the greatest likelihood of pests entering the country. They are the pathways for solid wood packing material and the movement of wood products across the Mexican–U.S. border.

By far, the greatest current pathway of exotic forest pests into the United States is through use in international trade of untreated solid wood packing materials. Although the current wood import regulation has reduced the risk of pest introduction compared to the preregulatory period by requiring the removal of 100 percent of the bark on solid wood packing materials, it is apparent that this pest pathway is still of concern. APHIS and its sister plant protection agencies in Canada and Mexico, through the North American Plant Protection Organization (NAPPO), are developing an international standard on solid wood packing material. The first draft of the NAPPO Standards for Phytosanitary Measures on the “Import requirements for wooden dunnage and packing materials from sources outside of North America” was released on October 9, 1997. Currently, APHIS is evaluating and continuing development of the draft along with the plant protection agencies of Canada and Mexico. The intent of the NAPPO document is to determine the best approach to regulating solid wood packing materials and to try to adopt consistent regulatory actions throughout North America. If a change is thought to be necessary, APHIS will propose new import requirements to the wood import regulation.

In response to the pest risk assessment for Mexico (summarized in the preceding section, chapter IV, section D.5.), a review is underway on the Mexican border exemption. APHIS has appointed a Mexican Log Risk Management Team to evaluate the new information supplied by the risk assessment. Part of this team’s charge is to reevaluate the Mexican border exemption currently in the wood import regulation.

Examining imported commodities in order to identify plant pest pathways and, if pathways are identified, identifying ways to reduce the probability of entry is a standard practice of APHIS. This standard practice identified the pathways and prompted APHIS to initiate the actions discussed above.

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VII. Appendices

- A. Summary of Public Comments on the Draft Supplement to the Environmental Impact Statement**
- B. Court Documents**
- C. Documents Related to Compliance**
- D. Acronyms**
- E. Glossary**
- F. Final Rule on Importation of Logs, Lumber, and Other Unmanufactured Wood Articles**

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Appendix A. Summary of Public Comments on the Draft Supplement to the Environmental Impact Statement

APHIS received 42 comment letters prior to the close of the comment period on February 10, 1998. In addition, 19 comment letters were received after the close of the comment period but in time to be analyzed. Copies of these 61 letters are included in this appendix. Several additional comment letters were received, but were not received in time to include in this appendix. These additional letters did not provide any new information that was not included in previous comment letters. In fact, all of the additional letters were similar to others that were received in that they expressed concern over the possibility of exotic pest species being introduced and becoming established in the United States, and requested a ban on the importation of raw logs.

Many of the comment letters provided technical corrections that were incorporated into the final supplement to the environmental impact statement (SEIS). The comments also pointed out areas where the draft SEIS was unclear. All of the comments that were received were carefully considered, and the draft SEIS has been revised and finalized accordingly. While considering the comments, the Animal and Plant Health Inspection Service (APHIS) identified 16 primary issues that were themes in many comment letters. The issues are addressed in no particular order. The numbers appearing in the margins of the comment letters contained in this appendix correspond with the numbered issues identified below.

ISSUE 1: Many commenters maintain that only the heat treatment of virtually all unmanufactured wood imports can ensure that they would be relatively pest-free, although some commenters believe that there are shortcomings with heat treatment that were not disclosed in the draft document.

RESPONSE: Heat treatment is the most effective way to guarantee that wood is free from all plant pests. When coupled with safeguards to protect from reinfestation and with an effective monitoring system in place to ensure compliance, heat treatment is currently the best protective measure known. The heat treatment requirements of the wood import regulation were determined after careful consideration of the scientific literature, years of industry experience, and comments received from numerous experts. In fact, as pointed out in the environmental impact statement (EIS), the current heat treatment requirements were accepted at the urging of numerous commenters during the comment period prior to finalizing the

wood import regulation. It is acknowledged that when the requirements are met, heat treatment is effective against pests. However, it has not been demonstrated that facilities exist to economically heat treat large shipments of logs.

The universal entry requirements in the wood import regulation rely primarily upon heat treatment (see table 4–9). Any wood product, from anywhere in the world, can enter the United States if the heat treatment requirements, as outlined in the universal entry requirements, are met. However, the heat treatment requirements can be difficult or impossible to meet without altering the characteristics of the wood article, depending upon the type of imported wood product. Often, heat treatment is not the only mitigation method that can be justified by the pest risk.

The Minimal Impact Principle of the General Agreement on Tariffs and Trade (GATT) (Sanitary and Phytosanitary article 5, paragraph 6), specifies that plant protection measures should not be more restrictive of trade than required to achieve the appropriate level of protection. If heat treatment at the point of origin is the only mitigation measure justified by the pest risk, then APHIS should require it. The mitigation requirements that APHIS places on international trade must be consistent with the pest risk involved and not be more restrictive than necessary to meet our phytosanitary goals. For example, heat treatment is not a required mitigation measure for importing logs and lumber from Canada because the pest complex is nearly identical to that of the United States. Another example is the carefully managed plantation-grown *Pinus radiata* from Chile and New Zealand. The minimal number of forest pests associated with these log imports can be successfully mitigated without resorting to heat treatment at the point of origin.

APHIS will continue to abide by the Minimal Impact Principle of GATT when examining future requests for the importation of wood products. APHIS will not compromise its goal of protecting the Nation's forests from the establishment of exotic pests, but will continue to achieve this goal consistent with international obligations.

ISSUE 2: Some commenters contend that the potential for noncompliance with APHIS rules by exporting countries has not been adequately analyzed, that the potential for noncompliance indicates the need for independent certifications, that stronger penalties for noncompliance are needed, and that the environmental consequences of noncompliance are not addressed.

RESPONSE: Noncompliance means that mitigation measures are not being applied as required by the wood import regulation. When this

occurs, the effectiveness of the regulation is reduced and the potential for environmental impacts increases. The threat of a pest infestation resulting from noncompliance has not been precisely determined; however, the overall threat is probably not of a large magnitude.

Regardless of the overall magnitude of risk, it is realized that only one infested shipment can result in the introduction of a foreign pest that could become established and cause severe environmental damage in the United States. Not only would a pest damage forest resources, but efforts to control, manage, or eradicate (if possible) the pest would likely involve the use of pesticides and other measures that would have adverse environmental impacts.

Unintentional noncompliance by exporters in foreign countries may occur because the regulation is new, but unintentional noncompliance is expected to rapidly decline as foreign exporters and U.S. importers become more familiar with the regulation and its enforcement. While APHIS has published the rule in the *Federal Register* and it has been publicized in the foreign trade community, one of the most effective ways to achieve compliance is through enforcement at the port of entry. As shipments are delayed or refused entry, steep financial costs, relative to potential profit margins, are incurred and a noncompliance situation is rapidly reversed.

There is less probability for intentional noncompliance. Although, as regulations become more stringent, the potential for smuggling also increases. Any smuggling activity would be in criminal violation of laws and regulations of the United States. In addition, it is a costly process to surreptitiously transship commodities in bulk from the country of origin into the United States. It becomes even less enticing financially when compared to the consequences of detection.

The harm that could be suffered should pest-infested unmanufactured wood products be illegally imported, either intentionally or unintentionally, into this country is as severe as any harm associated with other pest exclusion system failures considered in the SEIS. For this reason, the movement of unmanufactured wood articles into this country is monitored closely. Section 1505.3 of the Council on Environmental Quality's (CEQ) implementing regulations under the National Environmental Policy Act (NEPA) states in part that "[a]gencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases." Where, as here, implementation of a proposed action involves some uncertainty concerning risks to the quality of the human environment, monitoring is especially appropriate. Accordingly, a monitoring system, which makes maximum use of existing procedures, mechanisms, and protocols already in place with APHIS and the U.S. Customs Service, is

used to track imports of unmanufactured wood articles to ensure, insofar as possible, that noncompliance does not occur.

Several commenters believe that the penalties assessed because of noncompliance are insufficient to act as a deterrent. The current penalties are prescribed by Congress. A violator of the wood import regulation is subject to civil penalties, criminal fines, and jail sentences. APHIS also has the authority to revoke permits and compliance agreements, refuse entry of wood products into the United States, and delay wood product unloading. Refusal of entry of wood product cargo and the subsequent departure of the loaded ship, or delay of wood product unloading at U.S. ports, is extremely costly to the shipper and the ship owner. The possibility of revocation of a wood import permit and the subsequent loss of the U.S. market are economically damaging consequences of noncompliance. Many countries go to great lengths to protect their export business, and the loss of markets in the United States could be a major setback. In order to assist their exporters in meeting U.S. requirements, at least two countries, Chile and New Zealand, have included APHIS wood import requirements in their procedures for export.

Chapter IV, section B.2.c. of the SEIS contains a discussion of how APHIS regulates the certification program for unmanufactured wood products. APHIS is responsible for protecting this country's agricultural resources and its forest resources from exotic plant pests and will only accept certificates from an official foreign government agency. In a sense, the role of APHIS, as an agency of the U.S. Department of Agriculture (USDA) and as mandated by Congress, is to serve as a third party between the exporter and importer to protect the United States from plant pest infestations. APHIS and its inspectors have no financial interests in the potential importation process and have clear legislative mandates to protect U.S. interests. APHIS requires that the "Phytosanitary Certificate or other mutually agreed upon document" be issued by the Ministry of Agriculture/Forestry of the exporting country. A nongovernment entity cannot issue such documents. APHIS does not accept certification from other than official, designated government agencies.

At this time, APHIS does not have a preclearance program for unmanufactured wood products. If APHIS does introduce such a program, the public will be notified by a *Federal Register* notice. In the notice, APHIS will describe the preclearance program and solicit comments from the public.

ISSUE 3: Some commenters were concerned over the impact of the methyl bromide phaseout required by the Clean Air Act. Others expressed

concern about whether it is even effective to use methyl bromide fumigations at all.

RESPONSE: According to the wood import regulation, an importer must satisfy one of three sets of requirements to import wood products into the United States: the requirements for specified articles (see table 4–8), the universal importation requirements (see table 4–9), or the requirements for a general permit (see table 4–10). The general permit is reserved for wood products from Canada and the border states of Mexico, packing materials that have met certain standards, and for semi-processed wood articles that previously were issued specific permits but that have been found to present an insignificant pest risk (see table 4–8). The universal import requirements (see table 4–9), for most products, require heat treatment of articles either prior to arrival at a port of entry or within 30 days of import (for raw lumber from areas other than east Asia, Chile, or New Zealand). Any wood article can be imported if it meets the universal requirements. Specified articles are allowed entry under conditions other than those provided under the universal import requirements if alternative mitigation requirements can be demonstrated to ensure a safe importation. This standard often includes fumigation.

Methyl bromide currently is the only fumigant approved for use in meeting the wood import requirements. Despite the fact that international treaty (the Montreal Protocol) allows for exemptions for quarantine uses to the phaseout schedule of methyl bromide, the Clean Air Act prohibits the production and importation of methyl bromide into the United States after January 1, 2001. Soon after that date the existing stocks of methyl bromide in the United States are likely to be exhausted and methyl bromide will no longer be available for quarantine uses in the United States. Domestic production of methyl bromide for any use after January 1, 2001, will require an administrative decision and/or a statutory change. At this time, it is unclear if currently available methyl bromide treatments that occur overseas still will be permitted under the wood import regulation. If methyl bromide is not available, importers will have two options to choose from: import wood articles under the universal import requirements (primarily heat treatment) or find another fumigant that can replace methyl bromide. Other fumigants that may be efficacious could be used, but only after they have been accepted by APHIS and the regulation is or has been changed to accept their use.

One commenter stated that while table 4–1 indicated a need for research into the efficacy of methyl bromide against pathogens, the problem was not a lack of toxicity data, but the inability of a fumigant to penetrate to the core of a log or wood article in sufficient concentration to kill pathogens. Pathogens can be difficult to kill and, generally speaking, the exposure time

to a fumigant must be increased to ensure total kill of pathogens. The fumigation time necessary to kill all pathogens (surface as well as deep wood pathogens) with methyl bromide is uncertain. The physical problem of fumigant penetration at a sufficient concentration and for a sufficient length of time to kill pathogens may prove to be impractical to overcome in all cases.

Another commenter was concerned about other uncertainties associated with the methyl bromide control method. Specifically, the commenter noted that methyl bromide schedule T-312 was developed for oak wilt fungus infecting oak logs and schedule T-404 was developed to address bark beetles and “efficacy of these two schedules against other pests is unknown.” As described in chapter IV, section B.1.(c) (Uncertainties Regarding Control Method Efficacy) of the SEIS, it is infeasible to test a particular control method against every known or potential pest species. Normally, once a method is accepted as efficacious against a pest, the results are considered applicable to other similar species. This was illustrated in the text with the example of heat treatment. Methyl bromide is widely accepted as efficacious against most, if not all, organisms. However, the specifics about exposure time and fumigant penetration of physical barriers that must sometimes be overcome to reach the pest have not all been resolved. Where it has been shown not to be efficacious, methyl bromide is not required. The information known about methyl bromide efficacy against wood pests and pathogens is summarized in tables 4-1, 4-3, and 4-4. These tables indicate that methyl bromide will provide extensive to total reduction of pest risk but that additional research is needed for determining the most effective schedules for use against specific pathogens.

ISSUE 4: Some commenters believe that the draft SEIS did not adequately address endangered species/biodiversity issues.

RESPONSE: The sections, “Biodiversity” and “Endangered and Threatened Species,” of the Comparison of Alternatives (chapter IV, sections C.3.e. and i.) have been expanded. The relative ranking of the impact each of the alternatives would have on endangered species and biodiversity is presented in figure 2 of the SEIS. These impacts range from not affecting biodiversity or endangered species in the United States (by prohibiting unmanufactured wood imports, alternative 6) to greater relative impacts to endangered species and the existing biodiversity in the United States (alternatives 4, 2, 5, 3, and 6). There is substantial evidence to support the belief that the loss of biodiversity is a serious and accelerating world-wide problem and that the introduction of nonindigenous organisms may contribute to the problem. The purpose of the wood import

regulation is to reduce the risk of introduction of exotic plant pests to a negligible level.

ISSUE 5: Wood “smuggling” into the United States through Mexico and Canada has not been adequately addressed, in the view of some commenters.

RESPONSE: Title 7, Code of Federal Regulations (CFR), Parts 300 and 319, authorize USDA, APHIS, to issue a general permit for importation of wood articles from Canada and the Mexican border states without restriction. This practice would remain unchanged under each of the alternatives in the SEIS, except for alternative 1. Because wood articles from Canada and the Mexican border states are subject to fewer restrictions than wood articles from other export countries, commenters have suggested that attempts may be made to circumvent the regulation and illegally pass wooden articles from outside Canada or Mexican border states, through those regions, into the United States.

Commenters basically seek consideration of the potential risks to environmental quality that could be caused by criminal acts of third parties. The harm that could be suffered should pest-infested unmanufactured wood products illegally be imported through Mexico or Canada into this country is as severe as any associated with other pest-exclusion system failures considered in this document. Smuggling would violate the U.S. laws and regulations. Add to that the cumbersome and costly process of surreptitiously shipping commodities in bulk from the country of origin, through one or more additional countries, into the United States, and the scheme becomes quite difficult to manage. Deterrents to noncompliance with Federal Quarantine Regulations include civil penalties; criminal fines; jail sentences; and loss of revenue due to rejection of commodities, permit applications, and/or compliance agreements.

Still, the risk of harm from such a low-probability event is far from inconsequential. For this reason, consistent with prevailing laws and with treaty obligations, the movement of unmanufactured wood products from Mexico and Canada into this country is closely coordinated. In accordance with section 1505.3 of the CEQ implementing regulations under NEPA, a monitoring system, which makes maximum use of existing procedures, mechanisms, and protocols is used to track imports of unmanufactured wood articles from Mexico and Canada. The monitoring system assures, insofar as possible, that wood smuggling through those countries does not occur. The issue of imports from Mexico also is addressed in issue 14.

ISSUE 6: Mitigation measures that are ineffective individually cannot, according to several commenters, prevent severe pest infestations, nor can they be assumed to be effective collectively because no risk assessment was prepared on this issue, although some commenters disagree that individual measures cannot be effective collectively.

RESPONSE: When developing the risk mitigation requirements for the importation of *Pinus radiata* logs from New Zealand and Chile and Douglas-fir logs from New Zealand, great care was taken to match the available mitigation measures with the potential forest pests identified in the risk assessments. The individual mitigation measures were selected because they were effective in reducing the pest risk and they conformed to the requirements of the GATT SPS agreement. Methods that are effective against some pests but not others have been combined to complement each other and reduce pest risk to a negligible level. Mitigation requirements which are ineffective have not been required.

Each of the individual mitigation steps was carefully screened to ensure that it would reduce the chance of one (or more) of the identified exotic forest pests from becoming established in North America as demonstrated in tables 4–3 and 4–4. Although no single mitigation measure (until the final heat treatment) is effective against all types of pests, each mitigation measure demonstrates either extensive reduction (95%+ mortality) or total reduction (approximately 100% mortality) to one (or more) of the identified pests. The two exceptions to this are (1) the 45-day limit from harvest to shipping and (2) APHIS’ port-of-entry inspection and in-country processing requirements. These measures do not treat infested wood articles, *per se*. They are designed to reduce the risk of postharvest woodborer infestations and to provide additional monitoring for failures in the system so that any failures may be corrected. As demonstrated in tables 4–3 and 4–4, the pest risk from all of the groups of pests is totally or extensively reduced prior to entry into the United States. Then, within 30 days of entry into the United States, the mitigation measures totally reduce the expected pest risk from every identified group of pests.

The combination of complementary mitigation requirements results in a total package which effectively reduces the total pest risk to a negligible level. The effectiveness of these measures is thought to be high, since no plant pest or pathogen of quarantine significance has yet been found on logs meeting the above import requirements—in spite of extensive examination by Federal and State regulatory agencies.

ISSUE 7: Some commenters indicated that trade was given preference in the draft SEIS over environmental protection, and other commenters indicated the opposite.

RESPONSE: A number of commenters stated that APHIS is either (1) being overprotective and not meeting the minimal impact obligations as outlined in the GATT SPS agreement, or (2) compromising its plant protection function by attempting to minimize the impact on international trade.

APHIS is fully committed to protecting the Nation's agricultural resources and its forest resources from exotic plant pests, but it also has the obligation not to unduly and unjustly impact international trade. Attempts are continually being made to ensure that when mitigation measures are required by the wood import regulation that they impact international commerce only to the degree needed to meet APHIS' plant protection goal of reducing plant pest risk to a negligible level. To go beyond this protective standard would be considered unfair trade restrictions under GATT and subject to challenge by other trading partners in the World Trade Organization.

ISSUE 8: Data, including details about economic, social, and health care costs associated with pest eradication programs, are not adequately developed, according to several commenters.

RESPONSE: A summary of the Final Economic Analysis of the proposed wood import regulation was included in the draft SEIS; copies of the complete Economic Analysis are available by request from APHIS. The Council on Environmental Quality (CEQ) implementing regulations under NEPA do not require that an economic analysis be prepared on the alternatives; only that if an analysis is prepared, then the information shall be incorporated by reference (40 CFR 1502.23). Specifically, the CEQ implementing regulations state that the "weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." Any further economic analysis of each alternative in the final SEIS would be speculative and would distract from the important qualitative considerations of the decisions.

Both the EIS and SEIS discuss the losses to U.S. forest ecosystems from historical pest infestations (see chapter I, section B of both the EIS and SEIS). These costs or losses extend beyond economics into important qualitative considerations. For example (as discussed in both documents),

chestnut blight virtually eliminated the American chestnut tree, which at one time was a substantial component of our hardwood forests. An estimated economic loss from another devastating forest pest could be in the billions of dollars. The qualitative and aesthetic losses to our hardwood forest ecosystems are at least as significant. The final EIS discusses the significance of these types of losses and provides numerous examples of the high costs of pest control efforts and their often limited success.

The wood import regulation and the five alternatives currently being considered in this SEIS were in fact developed in an effort to prevent such pest introductions and subsequent economic and environmental losses. Attempting to assign a dollar value to all of the commercial (quantitative) and noncommercial (qualitative) values of these losses could prove to be interesting. However, it also would be highly speculative information and would not assist the reader and the responsible officials in their decisions. By reducing all such losses to dollar values, such an analysis could underestimate the importance of some species that could be or have been impacted. By assigning greater value to commercially important timber species over noncommercial species—which may have significant biological or aesthetic characteristics, but whose qualitative values cannot be translated into dollar values—such an economic analysis would confuse rather than clarify the issues.

The SEIS (chapter I, section A) also characterizes the potential losses from future infestations, and states that “once a defoliator is established, eradication would be unlikely.” Similarly, the document presents examples of both cost and effectiveness for control programs related to the eradication of the European and Asian gypsy moths.

As pointed out in the CEQ regulations—

Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail. Ultimately, of course, it is not better documents but better decisions that count. NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. (40 CFR 1500.1(b), (c)).

Our forest ecosystems and agricultural production certainly represent valuable resources. The question at hand, as presented in this EIS process,

is how best to realistically achieve the protection of those resources given what we do know and what is reasonably foreseeable from a scientific, technical, historical, environmental, and operational perspective.

In accordance with the NEPA regulations, the EIS (chapter IV, section B.1.) discusses the human health effects from the six alternatives that are “reasonably foreseeable” (40 CFR 1508.8). The draft SEIS discusses the reasonably foreseeable health effects of control and eradication efforts. This is a programmatic document which is required for “broad Federal actions such as the adoption of new agency programs or regulations” (40 CFR 1502.4(b)). APHIS will tier additional environmental analyses to this broad programmatic EIS as required by the CEQ regulations (40 CFR 1502.20). Thus, APHIS will be “tiering” from this programmatic EIS “of broad scope to those of narrower scope” (40 CFR 1500.4(i)). If a pest infestation does occur, an environmental analysis will be prepared before action to control or eradicate the pest is undertaken. It would address the specific health effects that could be associated with the particular control measures being considered for an infested area. To speculate what infestations could occur under the six alternatives being considered in this programmatic EIS, as well as where they could occur, what control measures might be available and appropriate, and what the affected biological and human populations could be, would be endless and highly speculative and would neither be helpful to the decisions at hand nor appropriate for a programmatic EIS.

ISSUE 9: Some commenters have expressed the view that definitions of terms should be included in the SEIS to provide clearer guidance to the reader.

RESPONSE: A glossary is provided in this SEIS and additional terms have been added or revised. For the purposes of the final SEIS, the definition for the term “saw log quality trees” has been expanded in the glossary (chapter VII, appendix E) to read “*Pinus radiata* trees from Chile and *P. radiata* or Douglas-fir trees from New Zealand that are plantation-grown and are living, healthy, and have no apparent signs of disease or pest infestation.” Heat treatment is defined in the glossary as “A process of using heat or heat with moisture reduction to raise and maintain the internal temperature of the wood to 71.1 °C for a minimum of 75 minutes or adherence to the procedures outlined in Dry Kiln Operator’s Manual.” The procedures contained in the Dry Kiln Operator’s Manual are too lengthy to be reproduced in the final SEIS; however, that document has been added to chapter VI, References Cited.

Certain terms do not appear in the glossary of the final SEIS, and are best handled through examples. The terms “manufactured wood” and “unmanufactured wood” are not defined. However, examples of wood articles that are regulated under the wood import regulation are specified in tables 4–6, 4–7, 4–8, and 4–9. Furthermore, a hypothetical example of how various wood products destined for import into the United States would be classified and treated under each alternative is contained in chapter IV, section C.3. Rather than relying on a rigid definition of “unmanufactured” versus “manufactured” in determining semi-processed wood commodity entry status, APHIS considers on a case-by-case basis the effectiveness in reducing the pest risk of the individual manufacturing processes used in creating the wood commodity. Characterizing the many various and diverse types of wood products as unmanufactured or manufactured would be an enormous task, would be subject to debate, and would not alone determine the risk of forest pest entry.

ISSUE 10: A number of commenters contend that inspections conducted within the integrated program are unlikely to be able to prevent pest introductions and that this risk is not adequately developed in the draft document.

RESPONSE: The SEIS does not claim that inspections, by themselves, can prevent all or most pest infestations. In fact, the acknowledgment that they cannot was the initial impetus for promulgating the wood import regulation. Prior to the regulation, inspection was the only mitigation measure available to APHIS for wood imports, and the need for more effective mitigation measures was recognized. It is stated in the SEIS that inspection alone is insufficient to protect against pests which could be associated with wood imports. Inspections, however, are a valuable part of an integrated program designed to prevent the establishment of exotic plant pests. Inspections help ensure compliance with the requirements of the regulation. They provide a mechanism for verification that the permitting and certification requirements have been met. They also provide some measure of mitigation, but because of the difficulties involved with physically inspecting large shipments of commodities such as logs, inspection certainly cannot stand alone as a mitigation measure. Inspection also serves as a tool for monitoring the success of the wood import regulation.

ISSUE 11: Several commenters stated that experience with the rules to date demonstrates their efficacy, although some commenters maintain that the rules have not been in place long enough to support that contention.

RESPONSE: Several commenters stated that the rule needs to be strengthened, while others believe it fulfills its intent to protect against exotic pests. One commenter suggested the rule was overly stringent and should be relaxed. A number of commenters, however, pointed out a misleading statement on page 42 of the draft SEIS (chapter IV, section B.2.d.): “APHIS’ experience, during the short period that the wood import regulations have been in effect, indicates that they have successfully prevented quarantined pests from entering the United States.” This statement has been withdrawn from the final SEIS and a new section added (chapter IV, section D.6.). This new section discusses interception records since the wood import regulation took effect. The reader is referred to that section.

Several commenters also pointed out that pests, such as the pine shoot beetle and Asian long-horned beetle, recently have been introduced into the country. While these pests were introduced prior to the effective date of the wood import regulation, commenters believe the regulation would not have prevented their introduction. While this is theoretical in nature, we do know that pest interception data gathered since the regulation took effect indicates that the portions of the regulation that address dunnage and the Mexican border state exemption should be revisited (see issue 14 and chapter IV, section D.6.), which APHIS is doing at this time.

ISSUE 12: The degree of uncertainty surrounding the risk of pest introduction has not been adequately addressed in the draft SEIS and there has been no valid risk assessment that includes uncertainty.

RESPONSE: Uncertainty is inherent to scientific research, and the evaluation of invasive organisms and pest infestations is no exception. It is acknowledged that there are pests which are hidden on their native hosts and have, therefore, not been identified as pests. These organisms have the potential to become pests should they enter and become established in the United States. It is also acknowledged that if the United States is to participate in international trade, some degree of risk will always be present. This is true for all types of exotic pests and pathogens, not just those that impact native forests.

The individual pest risk assessments, which form the basis of the SEIS, used the best available scientific information and included the expert opinions of scientific authorities. In both the pest risk assessments and the SEIS (e.g., chapter IV, section B), uncertainty surrounding pest risks and the corresponding mitigation requirements are addressed. The scientific knowledge regarding known forest pests and the risk they pose to forest resources in the United States has been summarized in the pest risk

assessments. Those documents also specify that while a certain amount of knowledge exists regarding forest pests, there are gaps in scientific information, and uncertainties exist regarding the potential for pest movement into the United States. The identification of these gaps initiates a cautious approach in developing mitigation measures (the less information, the greater the caution).

The wood import regulation, while directly focused on existing scientific information regarding forest pests, also attempts to provide some reasonable protection against unknown forest pests—especially pests from forest ecosystems which currently have little forest pest data. The wood import regulation is not intended to reduce the pest risk to zero, but to lower the pest risk to a negligible level without imposing unnecessary regulatory constraints. When new information fills in the gaps in scientific knowledge, this data will be incorporated into the decisionmaking process to determine if any modifications to the regulation are justified.

ISSUE 13: Some commenters contend that the impact of the rule on cultural resources of Native Americans has been overlooked.

RESPONSE: Additional information, specific to Native Americans, has been added to chapter IV, section C.5.h. The current wood import regulation greatly strengthens APHIS' ability to protect the Nation's forests from the establishment of exotic forest pests. This benefits all segments of the American people who value our forests, including Native Americans. All segments of the American public were encouraged to comment upon the wood import regulation, the accompanying EIS, and the draft SEIS. Comments were received and considered from Native Americans.

ISSUE 14: According to some commenters, the draft SEIS does not adequately develop the issue of risks associated with dunnage, and a pest risk assessment on that issue is needed. They also contend that the agency has not acknowledged a pending new risk assessment on wood products from Mexico.

RESPONSE: APHIS is currently collecting information on the risk associated with dunnage, crating, and other solid wood packing materials moving with international commerce. The recent findings of the Asian long-horned beetle and the pine shoot beetle in North America, along with specific interception information from the ports of entry on solid wood

packing materials, have demonstrated that the international movement of solid wood packing material is a plant pest pathway of concern.¹ Although the current wood import regulation has reduced the risk of pest introduction compared to the preregulatory period by requiring the removal of 100 percent of the bark on solid wood packing materials, it is apparent that this pest pathway needs to be reexamined in greater depth.

APHIS and its sister plant protection agencies in Canada and Mexico, through the North American Plant Protection Organization (NAPPO), are developing an international standard for solid wood packing material. The first draft of the NAPPO Standards for Phytosanitary Measures on the "Import requirements for wooden dunnage and packing materials from sources outside of North America" was released on October 9, 1997. Currently, APHIS is evaluating and continuing development of the draft along with its sister agencies in Canada and Mexico. The intent of this document is to determine the best approach for regulating solid wood packing materials and to try to adopt consistent regulatory actions throughout North America. If a change is appropriate, APHIS will propose new import requirements to the wood import regulation. This will include meeting in full the requirements of the Administrative Procedures Act and the National Environmental Policy Act.

In 1996, APHIS asked the U.S. Forest Service to look into the pest risk of importing pine and fir logs into the United States from Mexico. APHIS made this request because of an increased interest in importing Mexican pine and fir logs. The U.S. Forest Service responded by establishing a team of forest experts and scientists to evaluate the risk of importing these softwood logs into the United States. The final document "Pest Risk Assessment of the Importation into the United States of Unprocessed *Pinus* and *Abies* Logs from Mexico" became available in February 1998.

The pest risk assessment is summarized in chapter IV, section D.5. of the final SEIS. This risk assessment contains new, detailed information on a number of potential forest pests which could be found on unprocessed hardwood and softwood logs and lumber. APHIS has appointed a Mexican Log Risk Management Team to evaluate the new information contained in the risk assessment. Part of this team's charge is to reevaluate the Mexican border exemption. If a change is appropriate, APHIS will propose a change to the wood import regulation.

¹ Dawson, J.L.M., Bell, J.O., Allen, E.A., and Humble, L.M., 1997. Exotic insect interceptions from wooden dunnage and packing material. Presented at the North American Plant Pest Organization, November 1997.

APHIS will continue to request that the U.S. Forest Service conduct specific wood import risk assessments to ensure that the wood import regulation is based on the best scientific information available. For example, APHIS has requested that the U.S. Forest Service look into the pest risk associated with importing South American plantation-grown and managed *Eucalyptus* logs. As with the pest risk assessment for logs from Mexico, APHIS will reevaluate its regulation in light of any new scientific information.

ISSUE 15: Some commenters maintain that alternatives developed in the draft document are inadequate and have not been adequately compared.

RESPONSE: As required by NEPA and the CEQ regulations, the EIS and SEIS fully consider, at a programmatic level, a broad range of reasonable alternatives. While other alternatives or variations on alternatives considered in the EIS could be developed, the six alternatives (ranging from no Federal action to prohibition of all unmanufactured wood articles) that have been presented for consideration by the public and decisionmakers are representative of the full range of alternatives.

The Comparison of Alternatives, chapter IV, section C of the SEIS, has been expanded to better explain how the relative rankings of the alternatives were derived regarding both their effectiveness at pest exclusion and their environmental consequences. In the SEIS, we have made a concerted effort to display, compare, and contrast the alternatives' strengths and weaknesses given the information that is currently available. The final SEIS (chapter IV, section C.3.) also presents an expanded discussion of the treatment methods that could be applied and provides an example to walk the reader through the treatment of a hypothetical shipment of wood products.

This is a programmatic document that is using the best information currently available. Regardless of the pest exclusion method used or the alternative considered, uncertainties, risk, and data gaps do exist. Similarly, speculation beyond a historical and general nature of the possible consequences of pest infestations, changes in international markets, compliance possibilities, potential new treatment methods or chemicals is endless and speculative. We believe that historical examples best demonstrate what is at stake.

ISSUE 16: A frequent comment, often the sole comment in the correspondence, was that banning log imports is the only way to protect forest resources in the United States.

RESPONSE: The current entry requirements contained in the regulation for log imports attempts to match the pest risk with the degree of phytosanitary protection by allowing entry of all logs, from anywhere in the world, if they meet the universal requirements for heat treatment. The heat treatment requirements have been demonstrated to be effective against all known forest pests and pathogens. Coupled with adequate safeguards to insure compliance and to prevent accidental reinfestation, importation of these logs represents a negligible pest risk.

For specific types of log imports which demonstrate less of a pest risk, other less demanding mitigation requirements are provided. For example, log imports from Canada, because the country shares a nearly identical forest pest complex with the United States, are allowed entry requiring only a proof of origin. Some other examples, each with its own specific set of mitigation requirements matched to the pest risk, include small shipments of tropical hardwood logs moving into temperate climates, plantation-grown *Pinus radiata* logs from New Zealand and Chile, and small shipments of (non-Asian) temperate hardwood logs. All requirements were carefully considered and designed to reduce pest risk to a negligible level.

The function of the regulation is to protect the Nation's forests from the establishment of exotic pests. In accordance with the Minimal Impact Principle under GATT (SPS article 5, paragraph 6), the mitigation requirements that APHIS places on international trade must be consistent with the pest risk involved and not be more restrictive than necessary to meet our phytosanitary goals. In addition, APHIS must accept other mitigation measures, which are equal in protection to, but not necessarily identical to, our own, as stated in the Equivalence Principle under GATT (SPS article 4). When prohibiting or restricting the importation of unmanufactured wood products, APHIS must consider pest risk and all available mitigation measures.

Even if APHIS placed a complete ban on log imports, this action alone would not provide much additional exotic forest pest protection over existing entry requirements. Except for logs imported from Canada, foreign log imports generally have been small, intermittent, and carefully monitored for quality and plant pests both by industry and State/Federal regulatory agencies. However, as noted in the EIS and SEIS, there is the potential for large shipments of logs from New Zealand and Chile. Compared to the movement of lumber, wood chips, solid wood packing material, and numerous other types of wood products entering the United States, log imports are currently only a small part of the exotic forest pest risk equation. To be effective, the regulation has to address all major pathways that exotic forest pests can enter and become established. A

simple ban of all log imports will address only one relatively small pathway for the introduction of exotic pests.

List of Commenters

The following is a list of the commenters by the order in which their comments were received. Their comments follow this list.

1. Stephen L. Wood, Professor Emeritus
Brigham Young University
Provo, UT
2. Charlotte Shoemaker
Berkeley, CA
3. Jeffrey J. Morrell
Oregon State University
Corvallis, OR
4. Patricia Clary, Executive Director
Californians for Alternatives to Toxics (and affiliated groups)
Arcata, CA
5. David Gordon, Acting Executive Director
Pacific Environment & Resources Center
Sausalito, CA
6. Charlotte Shoemaker
Berkeley, CA
7. David Pilz
Corvallis, OR
8. Jeffrey K. Stone
Oregon State University
Corvallis, OR
9. Mark Fleming, International Procurement Forester
Crown Pacific
Bend, OR
10. Bayard H. McConnaughey, Professor Emeritus
University of Oregon
Eugene, OR
11. and 12. John D. Lattin, Professor Emeritus
Oregon State University
Corvallis, OR

13. Ruth Niswander
Davis, CA
14. Lynell Fay
Oceanside, CA
15. Ron Huber, Director
Coastal Waters Project
Rockland, ME
16. Denny Miles, Executive Director
Oregon Small Woodlands Association
Salem, OR
17. Bill Welsch, President
Safe Alternatives for Our Forest Environment
Hayfork, CA
18. Gwen Marshall
Protect Biodiversity in Public Forest Network
Cincinnati, OH

Victor G. Soukup, President
Ohio Native Plant Society
Wyoming, OH
19. Dave Overhulser, Entomologist
State of Oregon
Salem, OR
20. Tim McKay, Executive Director
The Northcoast Environmental Center
Arcata, CA
21. James V. Griffiths
Chief Executive
New Zealand Forest Industries Council
Wellington, New Zealand

22. Danna Smith, Network Coordinator
Ron Huber, Steering Committee
Dogwood Alliance
Cedar Mountain, NC
23. Kenneth R. Munson, Manager Forest Productivity & Research
International Paper
Dallas, TX
24. Dortehea Zadig, Senior Agricultural Biologist
State of California
Sacramento, CA
25. Marc A. Seidner, President
Fibreform Wood Products, Inc.
Los Angeles, CA
26. David L. Wood, Professor
University of California, Berkeley
Berkeley, CA
27. Gregory H. Aplet, Forest Ecologist, and
Robert M. Freimark, Assistant Director
The Wilderness Society
Seattle, WA
28. John P. McMahon, Vice President
Weyerhaeuser Company
Tacoma, WA
29. Craig J. Regelbrugge, Director of Regulatory Affairs
American Nursery and Landscape Association
Washington, DC
30. Daniel J. Hilburn, Administrator
Kathleen J.R. Johnson, Supervisor
John Griesbach, Plant Pathologist
State of Oregon
Salem, OR
31. John Wood, Ambassador
New Zealand Embassy
Washington, DC

32. Michael Axline, Counsel
Jenna App, Legal Intern
Jennifer Frozena, Legal Intern
Western Environmental Law Center
Eugene, OR
33. Irene Ringwood
Ball Junk LLP
Washington, DC
(on behalf of McPhillips Manufacturing Company, Inc., Mobile, AL)
34. David Gordon, Acting Executive Director
David Martin, Program Associate
Pacific Environment & Resources Center
Sausalito, CA
35. Scott Berg, Director
American Forest & Paper Association
Washington, DC
36. Patricia M. Clary, Executive Director
Linda Perkins, Mendocino Environmental Center
Cecilia Lanman, Environmental Protection Center
David Drell, Willits Environmental Center
Californians for Alternatives to Toxics
Arcata, CA
37. Fields W. Cobb, Professor Emeritus
University of California, Berkeley
Sage, ID
38. Dan Zimmerman
Californians for Alternatives to Toxics
Glen Ellen, CA
39. Leif Joslyn
Kensington, CA
40. Daniel Carvallo, Deputy Chief of Mission
Embassy of Chile
Washington, DC

41. Dennis A. Ostgard
Schwabe, Williamson & Wyatt, P.C.
Washington, DC
(on behalf of Terranova Forest Products, Inc., Bellevue, WA)
42. Mark Anderson, Resource Procurement
Schmidbauer Lumber, Inc.
Eureka, CA
43. Terry Lamers, Forestry Consultant
Dallas, OR
44. Adrienne Reed Storey
Klamath Forest Alliance
Etna, CA
45. George Wooten
Winthrop, CA
46. William C. Denison, Associate Professor Emeritus
Oregon State University
Corvallis, OR
47. Callie Jordan
Mosier, OR
48. Jean and Robert DeSpain
Visor, OR
49. Faith Thompson Campbell
Western Ancient Forest Campaign
Washington, DC
50. Doug Heiken, Western Oregon Field Representative
Oregon Natural Resources Council
Eugene, OR
51. Richard E. Sanderson
U.S. Environmental Protection Agency
Washington, DC
52. Kevin Smith, Conservation Director
Royal Forest and Bird Protection Society of New Zealand, Inc.
Wellington, New Zealand

- 53. Craig J. Regelbrugge
Director of Regulatory Affairs and Grower Services
American Nursery and Landscape Association
Washington, DC
- 54. Mary L. Petrofsky
San Francisco, CA
- 55. Chad Michael and Eleanor Gerould
San Francisco, CA
- 56. Dan Durmont
San Francisco, CA
- 57. Karen Ashikeh
Union City, CA
- 58. David Schneider
Berkeley, CA
- 59. Carl Linkhart
Oakland, CA
- 60. Dariel Heitkamp
Martinez, CA
- 61. Larry Schmidt
Oakland, CA



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10 December 1997

Mr. Jack P. Edmundsen
Environmental Analysis and Documentation
Policy and Program Development, APHIS
US Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundsen:

RE: Importation of Logs, Lumber, and other unmanufactured wood articles, Dec. 1997 draft, supplement.

The following comments are far removed from that which your 4 Dec. 1997 form letter requested, but somebody needs to say it. The band-aid approach to a solution of timber importation and demand problems is an emergency, crash-oriented approach to the non-solution of the problem. It will not work.

When I arrived at my office this morning, two items for immediate attention were on my desk. Although worlds apart, the two are intimately related.

The first was on page 9 of the morning paper (The Daily Universe, student newspaper of the Brigham Young University, vol. 51, issue 70, Dec. 9, 1997). The article was entitled, "Scientific study shows UV rays kill amphibians." It goes on to point out that University of Oregon research conclusively demonstrated that amphibians are being killed in substantial numbers by ultra-violet rays of the sun due to depletion of the ozone layer in the atmosphere. Other recent articles from numerous sources also suggest that we may be about a half generation away from being where those amphibians are now. At the elevation where I live, sunbathing, our national past-time non-activity, is equated with suicide (due to increased UV rays).

The second item on my desk was the Importation of Logs, Lumber, and Draft Supplement to the Environmental Impact Statement, December 1997. This statement basically says there are too many of us, timber resources cannot begin to meet the demand for wood and wood products.

Point No. 1. There are too many of us to be supported by existing resources. Social scientists and others concerned with human population must begin to educate people worldwide to genuinely do something to control human population. If we don't nature will do it for us. We will be the amphibians. Population

increase or reduction will have an enormous bearing on timber demand. We must do something about it and do it now.

In view of the existing situation, several options are open to us. One is that we do like the Easter Island inhabitants did (see Discover magazine, the featured article about 1995-1996), that is, use up our resources that enable us to make a living, then reduce demand through internal neighborhood warfare until a balance is reached. Another is that we can import raw logs or lumber and outbid the competition, until the remainder of the world catches on and rebels. This seems to be the current approach. Or, we can do something about it.

In 1965 I spent a month at Lienz, Osttirol, Austria, where I saw every square foot of unused wasteland planted into usable forest trees. The local forester had maps and charts showing the location, date of planting, pruning, thinning, and harvest for every tree in his district. When a tree was harvested absolutely everything was utilized, from leaves to bark and stump. And, there was a man standing nearby with a replacement seedling waiting for them to remove the stump in order that he could start the next generation. How many millions of acres of wasted land worldwide are lying idle on hillsides, gorges, etc. that could be growing timber? It may not be the best timber, but it could reduce pressure on the quality stands. How many youth groups are there that could and would provide free labor to plant and start seedlings. If the kids can do it with salmon, why can't they do it with trees. No company should be given a new contract to harvest more timber until they have planted and started new seedlings where their previous contract was harvested. Destroy the gimmie, gimmie, take, take, take gluttonous attitude we now have as a nation and replace it with pride in wooded walkways, community forests, etc., comparable that seen in much of Europe. We are going to do this sooner or later. Why not start now? Plant a diversity of native trees within their natural distributions, in so far as possible. Don't create potential ecological disasters, such as with exotic plantations in South America, that are just waiting to implode.

Point No. 2. Let's greatly enlarge our own timber production through the planding of forest trees on idle land, using primarily volunteer labor. But, do it in an organized, sensible way.

The importation of raw, unsawn logs, as is being done currently, carries the diseases, insect pests, and other problems from one continent to another and from country to country. Those diseases and pests, when established in new areas, can be devastating and cause problems unimaginable, when compared to the expected behavior of the pest. Why not scale down and retrain the surplus timber harvesting population we now have in this country and have logs converted into lumber or other wood products and shipped here? Leave the pest species and diseases where they are. In my specialty, classification and behavior of bark and ambrosia beetles (Coleoptera: Scolytidae & Platypodidae), it is estimated that more than one exotic species has been introduced and

RECEIVED
11/17/98

Charlotte Shoemaker
1618 Parker Street • Berkeley, CA 94703 • (510) 540-7185

11/2/98

Mr. Jack Edmundson
Policy & Program Development
USD 2 / APR 115
2/770 River Rd Box 149
Riverside MD 20737-1238

Dear Mr. Edmundson,

I am concerned about regulations
for Raw Wood Imports. I want them to
protect our forests and to require the
recommendation of good experts. The
American Wood Council call for local treatment
& protection from reinfestation prior to
arrival in US Soil. and they need to
be 3rd party certified.

Sincerely
Charlotte Shoemaker

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2

established as breeding populations in the USA since 1982, including some of the most destructive species in the world. And, I suspect that we haven't found half of those new arrivals yet.

Point No. 3. The people in the timber exporting countries need the harvesting and processing work just as much, if not more, than do our people. Contented people do not go to war, discontented, neglected, and exploited people do.

In summary, the supplement to the impact statement extends and justifies current practices. It not only does not correct the fundamental problem, it just leads us a little deeper into what has become a quagmire. There is a better way out.

It is hoped that I am not nearly as flaky as the above may imply. After observing for 70 years what we have done to this country, I am not proud of some of the things I have seen. But, I do have great confidence that we can find and recognize our problems, then fix them. It is with that trust in mind that I submit the above to you.

Sincerely,

Stephen L. Wood
Professor Emeritus



DEPARTMENT OF FOREST PRODUCTS
OREGON STATE UNIVERSITY
Forest Research Laboratory 105
Corvallis, Oregon 97331-5709



Telephone (541)737-4222
FAX (541)737-3385

January 6, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

I am writing in reference to Draft Supplement to the Environmental Impact Statement (December 1997) on Importation of Logs, Lumber and Other Unmanufactured Wood Articles.

After reviewing the document, I have the following comments:

1. In Table 4-1, the efficacy of irradiation against deep wood pathogens and insects is questioned. A number of studies have shown that irradiation is widely effective against these organisms and, in fact, APHIS recently completed an evaluation of Russian efforts to employ irradiation. Work at our laboratory has confirmed much of the Russian work. There are questions about dosimetry and attenuation factors, but these questions are of a similar nature to those raised about methyl bromide fumigation.
2. Also in Table 4-1, the efficacy of methyl bromide against pathogens is stated to require research. Methyl bromide is effective against almost all organisms, the difficulty is getting the chemical to the organisms at a sufficient dosage. The current APHIS fumigation schedules both fail to accomplish this task. No amount of research on toxicity of MB will overcome the inability of the chemical to reach the target organisms established deep within the wood.
3. Table 4.5. States that segregation of raw lumber will create partial or total pest reduction. While contact with infested logs can allow some fungi to enter adjacent logs and proximity can increase the likelihood of insect attack, the chances that segregation will produce total pest reduction is highly unlikely.
4. Table 4-4. States that methyl bromide fumigation of logs will eliminate 95 % of stains, as well as root and stem rots. I am not familiar with any studies that document this level of control. Is this number based upon APHIS sampling or a hopeful estimate? If the former, then these data need to be made public.
5. On page 39 in Section 3B, the statement is made that sensors be used to record temperature at 2 minute intervals over the 75 minute process. This statement leads the reader to conclude that heating need only be applied for 75 minutes, when, in fact, the

process is considerably more time consuming (depending on the thickness or diameter of the material). This statement should be modified to affirm that the temperature should be monitored for the entire process.

6. Page 49 Notes that there is a list of chemicals that have undergone analysis for human health risks. I am somewhat concerned that there is a statement that "if an introduced plant pest is one that is not known to APHIS or the U.S. plant protection community, information may be insufficient to develop a management plan." It is this level of uncertainty that continues to raise concerns. The apparent lack of a coordinated approach to monitoring a potential pest outbreak severely limits the effectiveness of the program. Mitigation, by its nature, accepts some risk that all pests will not be controlled. The absence of plan to contain any inevitable failure sharply increases the risk that such a release be more costly to contain and diminish the prospects for containment.

7. In Appendix c, Section 11, there is a requirement for heating during drying. I would submit that this additional sterilization is unnecessary if the logs are indeed heated for 24 hours at 165 to 180 F prior to peeling. I suspect it is included because the veneer will be dried anyway, but it should in no way affect other mitigation plans.

My final comment relates to the overall level of protection afforded by the regulations. I firmly believe that wood products can be safely imported into the U.S.; however, I believe this can only occur under the following circumstances:

1. The wood is rapidly processed after felling
2. All bark is removed
3. The logs are subjected to heating, irradiation, or other treatment that is lethal to all pests established in the wood.
4. A system is developed for confirming that the treatment specified in #3 has actually been performed on each log. Paper trails are not the answer, there must be some type of rapid field test that can be used for random inspections of shipments. This will help to keep the system honest.
5. The wood is protected with a supplemental treatment to prevent microbial and arthropod reinvasion prior to and during shipping to U.S. ports.
6. Countries that show a history of failure to comply should be more frequently inspected and, if necessary, imports from that country must be restricted.

The establishment of a comprehensive mitigation system would eliminate much of the need to track wood and by-products in the U.S.

Finally, I find it particularly disturbing to note that there has been relatively little improvement in the knowledge base supporting the proposed regulations. Much of the regulation is based upon extrapolation and supposition. Given the nearly 3 years that have lapsed between the release of the original EIS and the Supplement, I find this lack of progress the most disturbing outcome.

In summary, the EIS continues to be upon unproven assumptions. Given the resources available through USDA labs and the implications associated with failure of the proposed regulations, it is hard to believe that such a situation remains unchanged.

Sincerely,

Jeffrey J. Morrell

cc: Oregon Department of Agriculture

CAT'S CALIFORNIANS FOR ALTERNATIVES TO TOXICS

P.O. Box 1195 (78 Sunny Brae Center) Arcata, California 95518 USA
(707) 822-8497-7134 fax cats@jac.org <http://www.majorsruth.com/cats>

January 13, 1998

Jack Edmundson
Policy & Program Development
USDA / APHIS
4700 River Rd. Unit 149
Riverdale, MD 20737-1238

cc: Importation of Logs, Lumber, and Other Unmanufactured Wood Articles- Draft Supplement to
the Environmental Impact Statement December 1997.

Dear Mr. Edmundson,

We are writing to request an extension to the public comment period for the document noted above.

The reason we ask for this extension is simple: the supplemental EIS was released between Thanksgiving and the winter holiday season, when universities, government agencies and even public interest groups were closed or slowed down by extended vacations.

We appreciate the fact that you sent copies of the document so we would have them when notification was made in the Federal Register, yet even with this effort the apparent 60 day comment period is actually much less. In fact, because of the holiday disruption, it has been until early January that many of the interested parties have been able to get to its review.

The Supplemental EIS presents a lot of information about a very complex subject: wood import items are varied and originate from many environments and nations. The regulations are among the most complex that APHIS has promulgated. Because of the degree of complexity involved, sixty days of review are hardly enough, and with the time shortened by the holidays we are concerned that the public will not have enough time to adequately review the information presented.

I would ask that you extend this comment period soon so that people can be contacted in a timely manner.

Thank you for considering our request.

Sincerely,

Patricia Clary

Patricia Clary
Executive Director

Don Rubin

Oregon Natural Resources Council
PO Box 11649
Eugene, OR 97440-3948

CAT'S CALIFORNIANS FOR ALTERNATIVES TO TOXICS

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January 13, 1998

Jack Edmundson
Policy & Program Development
USDA / APHIS
4700 River Rd. Unit 149
Riverdale, MD 20737-1238

cc: Importation of Logs, Lumber, and Other Unmanufactured Wood Articles- Draft Supplement to
the Environmental Impact Statement December 1997.

Dear Mr. Edmundson,

We are writing to request an extension to the public comment period for the document noted above.

The reason we ask for this extension is simple: the supplemental EIS was released between Thanksgiving and the winter holiday season, when universities, government agencies and even public interest groups were closed or slowed down by extended vacations.

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The Supplemental EIS presents a lot of information about a very complex subject: wood import items are varied and originate from many environments and nations. The regulations are among the most complex that APHIS has promulgated. Because of the degree of complexity involved, sixty days of review are hardly enough, and with the time shortened by the holidays we are concerned that the public will not have enough time to adequately review the information presented.

I would ask that you extend this comment period soon so that people can be contacted in a timely manner.

Thank you for considering our request.

Sincerely,

Patricia Clary

Patricia Clary
Executive Director

Justin Ellsworth
Mendocino Environmental
Center



Jonathan S. Leo, Chair, Board of Directors

1/21/98

January 15, 1997

Mr. Jack P. Edmundson
Policy and Program Development, APHIS
US Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Importation of Logs, Lumber and Other Unmanufactured Wood Products--Draft
Supplement to the Environmental Impact Statement, December 1997. (SEIS)

Dear Mr. Edmundson

We are writing to request an extension to the public comment period for the Draft SEIS.

The Draft SEIS was made available to the public only in mid December, a time when many people, businesses and organizations are preparing for the winter holiday season. As a result, the actual process of reviewing this document has started well into the original 60-day comment period. The short time remaining before the February 10th deadline does not allow for sufficient technical review of this complicated issue.

In addition, the Pacific Environment and Resources Center (PERC), along with other groups, are still attempting to review the current import situation. This includes a thorough examination of the volume and types of timber that are being imported under existing permits, the countries of origin for this timber, the extent to which import volumes can be increased under existing permits, and similar issues. Without this information, it will be impossible to make informed comments on the Draft SEIS.

We believe it will be in the best interests of APHIS, the American public and American forests to have full, informed public comment into the proposed regulations. This will allow APHIS to fulfill its duty to protect America's forests from the threat of pest infestation. We urge you to extend the public comment period in order to facilitate informed review and comment.

Thank you for your time and consideration.

Sincerely,

David Gordon

David Gordon
Acting Executive Director

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Charlotte Shoemaker
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1/15/97

1/21/98

Jack Edmundson
Policy & Program Development
USDA/APHIS
4700 River Rd - Unit 149
Riverdale MD 20737-1238

Dear Mr Edmundson,

I am very concerned that raw wood imports from other countries put our forests at grave risk for new devastating diseases. I am also very concerned that such a raw wood import to even small & large destructive pests use in their country that is already heavily damaged practice.

- 1 Please make sure raw wood imports be heat treated & protected from deforestation before they arrive in this country.
- 2 Please make sure that heat treatments are third party certified.

Sincerely
Charlotte Shoemaker

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY



OREGON STATE UNIVERSITY
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January 23, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Dept. of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

SUBJECT: IMPORTATION OF LOGS, LUMBER, AND OTHER UNMANUFACTURED WOOD ARTICLES, DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT, DECEMBER, 1997

Adoption of the Final rule for Importation of Logs, Lumber and Other Unmanufactured Wood Articles (Alternative 2 of the Draft EIS, July 1994 and SEIS December, 1997) will result in the introduction and probable establishment of exotic insect pests and pathogens. This conclusion is inescapable from a careful reading of both above named documents, but is not explicitly stated in either. The sources, organisms, and severity of environmental and economic impact from such introduction is difficult to predict, but is likely to be very injurious and to far exceed the economic benefits that might be gained from adoption of the APHIS final rule over a more restrictive policy, such as alternatives 4 or 6 that would provide the highest level of protection to U.S. forests and agricultural industries. I justify this conclusion on the following grounds:

1. APHIS has essentially no authority to enforce compliance, to levy fines, or seek damages and/or reparation as a result of pest introductions resulting from noncompliance or negligence. Page 36 of the SEIS describes the action available to APHIS should an identified hazard organism be found in a shipment: "...PPQ form 523 is prepared and is sent to the shipper, consignee, and sometimes the the country of origin's agricultural official. ... This document is used to notify importers and/or shippers of the options available to them for commodities that are in quarantine status." Options for remedy or removal of the quarantined cargo are then listed. While this document (PPQ 523) is being prepared and delivered, the shipment in question is a potential source of pest introduction. Insects will emerge, fungi will sporulate, etc.

The paragraph goes on to state that "... The consequences of receiving a PPQ form 523 are added costs to the shipper, importer and/or consignee due to delays, added treatment costs and new shipping charges. Many times these costs exceed the profit margin of the commodity for the shipper or importer. From an economic standpoint, therefore, it is very undesirable to be cited with a PPQ form 523."

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1/21/98

David Pilz
P.O. Box 2238
Corvallis, OR 97339
January 9, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson,

I am writing concerning the adoption of the Final rule for Importation of Logs, Lumber, and Other Unmanufactured Wood Articles (Alternative 2 of the DEIS, July 1994, and SEIS December 1997).

By profession, I am a forester and mycologist. Although I have not previously commented, I have followed the debate about log imports with considerable interest. I am very familiar with how hard small insects and micro-organism like fungi are to detect, how difficult they can be to eradicate, and how rapidly even a few pathogenic reproduce. Given the immense damage that even one pathogenic introduction can produce (chestnut blight, Dutch elm disease, pine nematodes destroying Japan's matsutake mushroom crop, etc.), why should APHIS or the American public settle for anything less than the most rigorous standards for importation? I would think that even industrial forest landowners would support stringent standards to protect their forestry investments, let alone the public that would like to continue enjoying healthy private, state, and national forests. Why would APHIS adopt any but the most restrictive standards? Surely the profits of a few importers do not compare to the potential damage and losses.

Fumigation is useless for logs (it simply won't penetrate and methyl bromide use is on its way out). Only complete heat treatment of every cubic centimeter of every imported material will work. Fine, how will that be enforced adequately? You and I both know that is highly improbable. In this game of risk assessment, eventually our forest and the American public will lose big time to satisfy the profits of a few importers. The consequences of non- or inadequate compliance are simply not sufficient to deter importers from bending the rules or being sloppy. That risk was not adequately considered in your alternative selection. I strongly support greatly increased monitoring, much stronger penalties for non-compliance, and heat sterilization of all imported non-processed wood products. Please adopt alternatives 4 or 6.

Sincerely,
David Pilz
David Pilz

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1/24/98

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The "first line of defense" as described on p. 67 of the SEIS is a feeble, toothless watchdog, equipped only with a clipboard, mechanical pencil, and an APHIS form 523. It is not a very intimidating animal, having little or no power to enforce its own rules or to penalize violations. Consider the costs to US natural resources, forests, state departments of agriculture and taxpayers who will bear the burden of containing, suppressing and attempting to prevent establishment or eradication of introduced pest organisms. Consider the added costs and economic losses to U.S. agricultural industries, nursery products, and wood products exports should establishment of an introduced pest organism cause restriction of interstate or international movement of affected commodities. These costs will surely surpass any inconvenience or economic losses suffered by importers as a consequence of being issued an APHIS form 523. It should be assumed that noncompliance will occur unless a sufficiently strong deterrent to noncompliance exists. The undesirability of being cited with an APHIS form 523 is not sufficient to ensure substantial compliance.

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Noncompliance has already occurred and is a matter of the public record. During the period when small "test shipments" of imported logs were allowed (1992?), on at least one occasion western red cedar, a species not permitted under the rules governing the test shipment was unloaded at Coos Bay, Oregon from a shipment originating in New Zealand. APHIS finally granted an exemption to allow processing of these logs after disposal by burning was prohibited by environmental regulators.

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2. Even before APHIS can quarantine a shipment or issue its most severe penalty, a pest organism must be detected by inspection. The magnitude of the task facing APHIS inspectors is enormous and highly biased in favor of an organism escaping detection. Careful and meticulous inspection of a shipment of logs for minute boreholes or microscopic signs of fungal pathogens is an impossible job, regardless of the number and quality of the personnel available. The inspection process is time consuming, and each day the commodity sits in port the greater the likelihood that an injurious organism, if present, will emerge, spread, and reproduce. Inspection is likely to identify only those shipments of commodities where incidence of pest organisms is exceptionally high. Commodities bearing cryptic or low incidence of pest organisms are practically assured to go undetected.

Information provided in the SEIS section D gives additional updated information describing the APHIS AQI program. A careful reading shows that this program has serious shortcomings, as found in the General Accounting Office review, and raises strong doubt that the inspection program will be adequate to accommodate the increased demands brought about by large scale importation of untreated wood products. The SEIS acknowledges that APHIS is unable to predict potential plant pest introduction and establishment from importation of wood articles, or the consequences of such a pest introduction. It further acknowledges that the suppression and eradication of introduced insect pests and pathogenic fungi can be costly, and often efforts are ineffective.

12

Instead of relying on inspection to detect hazard organisms, they should be assumed to be present and the commodity treated accordingly with appropriate sanitation procedures. So far the only sanitation procedure demonstrated to reduce risk to acceptable levels is heat treatment with or without moisture reduction.

3. For a potential pest organism to be detected and identified for potential action, according to page 36 and appendix C of the SEIS, it must be (1) correctly identified (2) be evaluated with respect to hazard status, and (3) be evaluated with respect to agricultural concern and (4) be designated with a risk hazard rating that will determine quarantine action. Each of these steps is subject to error on the part of the inspector or risk assessor, to flaws in the inspection and assessment processes, and, most importantly, to uncertainty with respect to the information required to make an accurate hazard analysis.

During the lengthy process of drafting the rules and refining the pest risk assessment process (nearly eight years have elapsed since the first log import risk assessment panel met in Portland, Oregon in 1990), it has been stressed repeatedly by mycologists and entomologists that the organisms most likely to cause damage to U.S. natural or agricultural resources are those that are cryptic on their native hosts and about which we have little information on which to base a hazard analysis for introduction to host plants in North America. Little information has emerged during the past eight years to diminish this fundamental knowledge gap, although some very useful information has emerged to illustrate the ability of introduced pathogens to undergo genetic change in a novel habitat and become a more serious threat than when originally introduced.

The Dutch elm disease pathogens, *Ophiostoma ulmi* and *O. novo-ulmi*, have apparently been introduced separately into North America during the past century. Much evidence has been obtained that suggests reproductive isolation between European and North American populations of both species, and a separate North American race of *O. novo-ulmi* is now recognized. The Dutch elm disease pathogens may help illustrate some of the shortcomings of our scientific knowledge in the process of pest risk assessments. The two separate species were not recognized at the time of apparent introduction of *O. novo-ulmi* to North America, but probably if it had been detected and accurately identified according to the best information available at the time, would have been identified as *O. ulmi*. Since *O. ulmi* was already established in the U.S. when *O. novo-ulmi* was introduced, if detected, would this organism have been deemed quarantinable or "no action" by APHIS? Later evaluation has proved that *O. ulmi* and *O. novo-ulmi* are separate species, that *O. novo-ulmi* is more virulent than *O. ulmi* and the cause of a second pandemic of Dutch elm disease, and that in North America *O. novo-ulmi* is replacing populations of *O. ulmi*. Studies have shown very low genetic variation in the North American isolates of *O. novo-ulmi*. Clearly our understanding of fungal population genetics is at present inadequate to predict what the consequences of additional

sources of genetic variation might be in the case of endemic or introduced and established pathogens and insects.

How will APHIS treat pathogens found on imported commodities thought to be already present and established in North America? Are novel genotypes, more virulent races and the possibility of separate but heretofore unrecognized species to be considered?

4. Organisms that may be not injurious in their endemic habitat may be highly damaging in a new host or environment. The pine wilt nematode that is not a serious problem in the pines of the southeast U.S. is a highly destructive wilt pathogen in Japan, where it has been introduced. The chestnut blight pathogen has been a destructive agent of widespread ecological change in forests in central and eastern North America is not a serious problem in China, the presumed source of the North American introduction. A very large number of organisms with a potential for damage to North American forests and agriculture may therefore not appear on the APHIS quarantine list either because insufficient information exists or because they are not deemed to be of sufficient hazard to activate remediation.

A great many species of fungi occur as cryptic colonists of various hosts. Although few of these are likely to be virulent pathogens, the history of pest introductions to North America has shown that a few is more than enough to cause considerable ecological and economic damage.

5. Relatively long periods are allowed between importation and treatment for some commodities, allowing a significant window of opportunity for hazard organisms to escape before treatment is performed. Sixty days is allowed to elapse between release from the port of arrival and processing for Monterey pine logs (from Chile and New Zealand), and Douglas-fir logs (from New Zealand), thirty days for raw lumber. Fumigation is sufficient only as a superficial treatment, within sixty days insects and fungi from interior of the logs will have had sufficient opportunity to emerge to the surface and escape. Thirty days is allowed to elapse for raw lumber (Monterey pine from Chile, Douglas-fir from New Zealand under 319 40-5, other sources under 319 40-6) and untreated wood or bark chips between importation and processing. This period is long enough to allow incubation and maturation of both insect and fungal pests.

Furthermore, some waste generated from one process must be transported long distances for further treatment, providing another opportunity for mishap. Such a mishap occurred in early 1995 when a chip truck loaded with waste from milling imported pine logs overturned and spilled its load while enroute between the sawmill in eastern Oregon and a pulp mill on the Oregon coast. The spill occurred in a prime area of conifer forest on the west slope of the Cascade mountains. A better illustration of the uncertainty and potential for accidental release of a harmful organism could not have been devised. Under the APHIS final rule, chipped waste could traverse several hundred miles over the Cascade and Coast mountain ranges,

this endangering prime conifer forest ecosystems.

6. Despite compliance with the APHIS rule, some insects and pathogens may escape the sanitation treatments. Insects and fungi that should have been removed/killed by debarking and fumigation have been recovered from logs that were apparently treated in compliance with the APHIS rule during the period when test shipments under interim regulations were permitted. Recent interceptions of *Ips typographus* have been reported from the Great Lakes area. Some information suggests the sources are inadequately debarked imported logs and wood pallets. *Ips typographus* is considered a serious threat and establishment of populations in North America would likely be very damaging.
7. Recent introductions of at least three harmful insect species, the Asian longhorned beetle, the pine shoot beetle, and *Ips typographus*, have been traced to wood packing materials. Clearly, the regulations regarding wood packing materials are demonstrably inadequate to prevent accidental introductions of injurious organisms and should be made more stringent. These regulations, similar to those governing the importation of raw logs, require only a document from the importer stating that the material meets import requirements. These are different depending on whether the material is combined with regulated or unregulated articles. For unregulated articles the only requirement is that the material is **apparently** free of live plant pests. I doubt that most exporters/importers are competent to adequately determine whether a live plant pest is present. For regulated articles the material must have been heat treated, fumigated, or treated with preservatives or meet all importation conditions required for the regulated article the packing material is used to move. This dual standard for wood packing materials, in effect, makes unregulated articles sometimes a greater hazard than regulated articles. Heat treatment or fumigation should be required of all wood packing material, regardless of whether the article being handled is regulated.
8. Certain articles, such as untreated pine railroad ties, are apparently now being imported for preservative treatment in the U.S. These materials are apparently being handled under the rules governing untreated green lumber and are being allowed 30 days for treatment. The Oregon Department of Agriculture has been monitoring and inspecting some of these articles and has found abundant evidence of the presence of pathogenic fungi and insects in untreated Mexican pine railroad ties. The fungi isolated from these ties include species rated as pathogens of "moderate" risk in the pest risk assessment for *Pinus* and *Abies* logs from Mexico (USDA APHIS October, 1996) draft document. In the period allowed for transit to the place of treatment and during the 30 day interval prior to preservative treatment fungal sporulation can occur and live insects can emerge. Depending on the time of year, 30 days can be a suitable incubation period for insects and pathogenic fungi. Unless more stringent sanitation requirements are adopted for these articles an injurious introduction will inevitably occur. Importation of these green wood articles

should be covered by the same restrictions required for other unprocessed logs. At a minimum, fumigation should be required before entry is allowed, but preferably these articles should be heat treated. Requiring the same treatment for all untreated wood articles under the universal import options (section 319.40-6 of the final rule) would provide a substantially higher level of protection against pest introductions.

The supplemental Environmental impact statement was prepared in response to a court finding that the original EIS was deficient in three main respects: 1) ineffective control measures, 2) omission of important information concerning uncertainties associated with the risk assessment process, and 3) lack of adequate comparisons of proposed alternatives. The finding of the original EIS was that of the alternatives considered, only alternative 1 (no action) would result in significant environmental impact. The supplemental EIS addresses the shortcomings identified by the court, but the fundamental flaws in the process of risk assessment and uncertainties regarding compliance, detection and identification of hazard organisms, and risk of escape of SEIS drafts, virtually no new research that I'm aware of has been funded by USDA or published to support the adoption of the sanitation measures favored in the APHIS reports or to support the finding of no significant environmental impact. Furthermore, the EIS does not describe what sanitation measures will be allowed to replace methyl bromide, the fumigant specified in the treatment protocols, once this material is removed from production in 2001.

How can an introduction occur under the proposed APHIS rules?

- A. Noncompliance with APHIS final rule, required treatments not performed or inadequately performed.
 1. Organism escapes during interval between inspection, detection, notification to shipper/consignee and remediation of the commodity
 2. Organism not found in inspection
 3. Organism detected but no action taken.

- a. Organism not on APHIS quarantine list
- b. Organism on quarantine list but not rated as a hazard organism. Organism may already be established, may be a separate species but unrecognized, may be a novel virulent biotype, or may have an unrecognized damage potential on a new host.

B. Compliance with APHIS final rule, but harmful organisms introduced

1. Treatment not required

- a. Organisms escape during transit or during period allowed before treatment in U.S. (green lumber items, e.g. railroad ties).
 - b. Infested wood packing materials, treatment not required if apparently free of live pests.
 - c. No treatment required for various commodities
2. Required treatment performed but is inadequate or untimely
- a. Organism escapes or survives treatment, is undetected in inspection or is detected but not rated as significant hazard.
 - b. Organisms escape before treatment in transit, e.g. the chip spill incident, Jan. 1, 1995.

The EIS has been patched, but the underlying flaws still exist. It still relies largely on untested or unproven treatments, wishful thinking, self regulation by importers, and paperwork to deter or diminish the possibility of a harmful pest introduction. The result is not merely an unacceptable level of risk, it is a certainty of failure.

What is being placed in jeopardy? Nothing less than the health of our native forests, a tremendously valuable natural resource, estimated to contain some 1,167,502,800,000 board feet of softwood lumber. The introduction of a pathogen that could weaken or remove even a minor tree species from the native forest would be catastrophic. Species that are being contemplated for import however include Douglas-fir from New Zealand and larch species, close relatives of Douglas-fir, from eastern Russia. Importation of these species places our most abundant and most valuable native species, Douglas-fir, at particular risk because pathogenic fungi usually are very closely adapted to certain hosts, and the probability of an introduced pathogen jumping to a closely-related species is greater than for a more distant relative. Douglas-fir grows in a nearly contiguous belt from California to Alaska, and an introduced pathogen or insect pest would face no significant natural barriers. Native forests are not the only resource in jeopardy however, Oregon's agricultural and ornamental plant industries also will be placed at risk. Even with the greatest care, the strictest rules, and highest stringency of sanitation we can expect, massive importation of unprocessed logs is a gamble against nature, which we will inevitably lose.

What will the consequences of introduction be and who will have to pay for remediation? U.S. timber businesses and their employees, owners of timber lands, and agricultural and nursery businesses will certainly be adversely affected. State departments of agriculture in Oregon, Washington and California will have to cope with the economic consequences of quarantines of agricultural produce and nursery stock, and implementation of eradication measures. Citizens of the United States will suffer the loss of valuable natural resources from public lands and will ultimately bear the costs of the damage.

January 23, 1998

2

This is much too great an economic risk to allow as many opportunities for pest introduction as detailed here. Despite the comprehensive effort by APHIS, the proposed import rules remain manifestly inadequate and the penalties for noncompliance are too minimal to justify self regulation by importers. To protect the native forests of the United States and the interests of our agricultural enterprises these rules must be substantially strengthened.

Respectfully,



Jeffrey K. Stone



Crown Pacific

RECEIVED
1/26/98
9

Mr. Jack P. Edmundson
Environmental Protection Office
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
RIVERDALE, MD 207371238

Dear Sir,


2

Crown Pacific has been receiving both green lumber and logs from New Zealand and Chile for some four years. In that time we have had good success with all products. They are treated with great care both in the U.S., New Zealand and Chile.

Having read through the draft FIS it appears there are only minor problems with the original. No where in the draft did I see a problem with the product only the verbiage in preparing it. We in the forest industry are very concerned about infestation of any kind and have taken great care with the import of the wood from both countries.

In every aspect of life there is some degree of risk. However in this case I feel more than adequate measures have been taken to prevent accidents from happening. The wood has been delivered to two ports in Oregon with different people handling the wood and no failure in the system has occurred. We at Crown would encourage you to approve the FIS, and let us get on with receiving the wood we need to feed our mills and keep our people employed.

Sincerely,



Mark Fleming
International Procurement Forester
Crown Pacific

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RECEIVED
2/3/98

1653 Fairmount Blvd.
Eugene, OR 97403
January 28, 1998

Mr. Jack P Edmundson
Environmental Control Officer, APHS

Dear Mr. Edmundson:

The new APHS DEIS appears to lack necessary precautions to prevent importation of foreign insect pests into the U.S. with imported logs and wood products. I worked for a time in the Federal Insect Research Station in Alhambra, California, under Dr. Campbell, many years ago. One of the researchers there had a project which involved inclosing lengths of logs in fine mesh cages and holding them up to several years to see what emerged from them. It was amazing how many kinds of insects eventually emerged and how long it took several of them. Our family also had a fine hardwood chair for several years. Finally small holes began to appear due to emergence of tiny wood boring beetles.

Tropical woods in particular have a much greater number of species of destructive insects, although forests everywhere have at least some. I feel that importation of logs from distant lands should be far more strictly regulated and from some areas banned altogether. It is not worth risking another Dutch Elm episode in our forests in order to enrich a few importers and perhaps seriously damage the regions from which the logs are taken.

Sincerely,

Raymond H. McConnaughey

Raymond H. McConnaughey,
Professor (emeritus), Biology, University of Oregon, Eugene, O.

28 Jan 98

11
RECEIVED
2/3/98

Mr. Jack P Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHS.
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

This letter refers to: Importation of logs,
lumber, and other unmanufactured wood
articles. Draft Supplement to the Environmental
Impact Statement, December, 1997.

(Letter follows). --

Note: Typed version follows

J. R. R. R.

12

January 29, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale MD 20737-1238

Dear Mr. Edmundson:

This letter refers to: Importation of logs, lumber, and other unmanufactured wood articles.
Draft Supplement to the Environmental Impact Statement, December 1997.

By way of background, I have been involved in the issue of raw log importation since 1990 when the Oregon Department of Agriculture requested my comments on the possibility of environmental risks of such importation. I was an invited participant in the 1991 meeting in Portland, Oregon, and in fact wrote a substantial part of the resulting volume. I have reviewed every document produced on raw log importation and my comments are a matter of public record. I was an invited member of the USDA-Forest Service Science Team that met in Sacramento, California, in 1992 and prepared the requested protocol for raw log importation into the United States. This protocol was delivered to the Forest Service shortly after the meeting. To the best of my knowledge, this protocol has never been incorporated into the deliberations of USDA/APHIS although there was an APHIS representative in attendance during our deliberations. I have mentioned this document to APHIS repeatedly but with no response. One of the main recommendations from this science team was that proper heat treatment be applied at point of origin not within 60 days after arrival of raw logs into the United States as stated on all publications from APHIS. This science, prepared by specialists, provided a detailed scenario, based up real information and experience. It is difficult to imagine that this document, cited at last in the 1997 Draft Supplement on page 85, has been ignored completely by APHIS. In its place, we find excessive rhetoric. To my disappointment, nothing has changed so I will not repeat what is to be found in the 1994 edition of this document. APHIS has never provided an acceptable explanation why this 1992 document was ignored nor why the proper heat treatment at point of origin of the logs was changed to allow 60 days after the arrival of raw logs into the United States for heat treatment. This is a dangerous and irresponsible act for it allows ample time for organisms to escape - the very organisms you claim to be protecting our environment from colonizing. Several specifics are cited below, the rest has been published over the many years (now 8) that this matter has been under consideration.

- Potential future imports (p. 10). Nothing much is said about the risks of bringing in raw logs with bark attached via train from Mexico, across the landscape to southern Oregon. It has been assumed that adjacent states (not countries) represent no risk. Even a quick glance at the distributions of forests in northern Mexico would disclose the enormous desert gap between these forests and the forests of western United States - a gap now breached by ignoring biological reality and substituting political boundaries instead. Having spent considerable time in the mountains of northern Mexico, I can assure you those forests contain a number of potential forest pests.
- Lack of scientific data (p. 23). You acknowledge the lack of adequate scientific knowledge and the resulting uncertainty but brush all that aside on the assumption that "paper protection" will serve. This is a naive and dangerous assumption. Much scientific knowledge could have been obtained since the 1994 edition if some effort had been made.



OFFICE
STATE
ENTOMOLOGY

2040 Cordley Hall
Corvallis, OR 97331
503-754-2907

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Mr. Jack P. Edmundson
January 29, 1998
Page 2

- Global climate change: To claim that plantations are "good" for global climate change is ludicrous - the native forests have been cut over vast areas to make room for the plantations. These plantations are periodically clear cut on a far shorter rotational time than that found in normal forest succession. No real proof of your claims were included.
- Endangered and threatened species: You must revisit the officially stated mission of APHIS - the protection of the native biota. Your treatment on p. 66 is totally inadequate in providing an accurate discussion of each alternative. You are hiding behind the U.S. Fish and Wildlife Service's analysis. Considering the large number of non-indigenous species that this agency has moved around and introduced, their approval of your actions is not inspiring. However, there are people who do know a great deal about this subject.
- Regulatory requirements (p. 24, p. 55-56). This looks rather good until you see that these regulations do not provide adequate heat treatment, if any, at point of origin as recommended. A 60 day allowance for heat treatment in the United States is substituted Under "New Methods and Techniques" (p. 75) you offer shipboard heat treatment - but this is not even possible today. You also offer irradiation but this, too, is not possible today and it is likely to be very long in coming, if at all. Both of these are "feel good" statements that have nothing to offer now.
- Biodiversity: Here you repeat your earlier words from the 1994 version but you fail to indicate that the Office of Technology Assessment 1992 publication was the source. Only alternative #4 would provide that protection. Your selected alternatives do not. You fail to provide any proof that plantation grown trees are "safer" than regular trees. Remember, native trees and vegetables were removed to make room for the plantations - greatly reducing biodiversity.
- Ozone depletion: You know that methyl bromide is scheduled to be phased out because of its impact on the ozone layer and yet you continue to act as though it will always be there. It is, of course, inadequate as a means of control for organisms inside the logs.
- Human health: You should talk to the people of AFL/CIO who actually would have to handle pesticide treated logs (I have). They would certainly prefer the non-chemical heat treatment to reduce the risk to their health.
- Potential pest introductions: They were mentioned (p. 51) but nothing was said (nor has it been said) about the possibility of transport of a wide variety of agricultural pests that could be introduced in this way.

Finally, it is imperative that USDA/APHIS examine its stated mission and compare that mission with their actions. It is a sham to state one thing and do another.

Sincerely,

John D. Lattin

John D. Lattin
Professor of Entomology, Emeritus
Department of Entomology
Oregon State University

4



1

OREGON
STATE
UNIVERSITY

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Jan. 30, 1998

(13) [REDACTED]

Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis & Documentation,
Policy and Program Development,
APHIS, 4900 River Rd., Unit 149
Riverdale, Md. 20737-1338
Dear Mr. Edmundson:

Expanding trade is often the means of introducing new pests that threaten the ecological health of our forests. APHIS must strengthen its regulations so that we can maintain an effective barrier to these pests. As a former resident of Buffalo, N.Y., I am horrified to remember the daily buzzing of the chainsaws as our beautiful elm forest was removed in street after street because of Dutch elm disease. Log imports brought the fungus which causes "Dutch" elm blight. APHIS should protect us from similar disasters!

APHIS's new DSEIS fails to remedy the weaknesses in the earlier EIS. It also does not address new (over)

6

information. Please take these matters into consideration as you consider the original EIS. Please prepare a more complete EIS - one that strengthens regulations! Please do not assume that ineffective individual measures will be effective when applied collectively. Please do not omit important factual information concerning uncertainties in risk assessments and control measures and the health impacts of pesticides. Also, be certain to prepare an adequate comparison of alternatives.

With many memories of The Dutch elm catastrophe in Buffalo, I beg you to establish new regulations that will protect us from the importation of pests! Thank you.

Sincerely,
M. Ruth Hiswender
632 Barbera
Davis, Ca. 95616

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1-31-98

Jack Edmundson
Riverdale, MD

Dear Mr. Edmundson—

Please Prevent the importation of Pests & the

Could harm our forests.

Please prepare a mass pamphlet £15 ^{each}

Strengthen its regulations

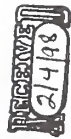
Please write back on this critical issue

Thank you.

Lynell Fay



Lynell Fay
200 N. El Camino Real Ste 239
Oceanside, CA 92054-1748



(14)

FROM

2077855310

COASTAL WATERS

FEB -07-98

12:18AM P.001



(15)

COASTAL WATERS PROJECT
60-A Grace Street
Rockland ME 04841

2/8/98

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development
Animal and Plant Health Inspection Service
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Draft Supplemental Environmental Impact Statement on
Importation of Logs, Lumber, and Other Unmanufactured Wood
Articles

Dear Mr. Edmundson

The Coastal Waters Project herein comments on the Draft
Supplemental Environmental Impact Statement on Importation of
Logs, Lumber and other Unmanufactured Wood Articles.

The Coastal Waters Project is a citizens' association dedicated to
the protection and restoration of the Gulf of Maine and its
watershed. Members of the Project live, work and enjoy the forests
of the Gulf of Maine watershed. As international trade through ports
in the Gulf of Maine region increase, the region's forests and
associated aquatic ecosystems face a rising risk of infestation with
nonindigenous species introduced with or within unmanufactured
wood products.

Nonindigenous species such as the gypsy moth, European Larch
Canker and spruce budworm have caused extensive harm to forests
in the region. Ecologically and economically important native tree
species, including spruce, elm and chestnut have declined severely
due to imported pests. The decline or loss of these species has
had considerable impacts in our region, including reduction of
habitat, timber resources and water quality.

NOTE: The papers
on maps is 100%
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CWPI/APHIS Page 2 of 6

Because there is a strong likelihood that the continuing introduction of exotic organisms into our region in unmanufactured wood products will result in further environmental and economic harm to the forest resources of our region we strongly urge that APHIS adopt Alternative 6 'Prohibit importation of unmanufactured wood.'

The information supplied in the FEIS and the DSEIS clearly indicates that all alternatives that allow any unmanufactured wood product importation through ports at Boston, Portsmouth, Portland, Searsport or Eastport, including wood chips, whole logs and packing materials, will result in the introduction and transmission of plant pests into the forests of the Gulf of Maine region.

On page 1 of the FEIS APHIS notes that "APHIS is charged with protecting our country's agricultural and forest resources from plant pests."

To carry out this objective, and in response to litigation and judicial direction, APHIS has propose six alternatives for consideration:

- Alternative 1: No Action
- Alternative 2: Wood importation regulations (preferred)
- Alternative 3: Prohibit importation of Untreated Wood except Packing Materials
- Alternative 4: Prohibit importation of Untreated wood
- Alternative 5: Prohibit importation of Unmanufactured wood except for packing materials
- Alternative : Prohibit of Unmanufactured Wood

APHIS acknowledges in the DSEIS that Alternatives 1- 5 will all result in the introduction and transmission of plant pests, with potentially devastating effects. APHIS cites a US Forest Service study that estimates direct timber losses to the United States from plant pests introduced in the course of unmanufactured wood importation infestations as high as \$58,000,000,000. 58 Billion dollars.

CWPI/APHIS page 3 of 6

Nonetheless, APHIS continues to hold that : "Measures can be taken to reduce the probability of pest infestation to a negligible level, and thus, maintain the value of the wood product." (Section IV-A, page 19)

APHIS proposes to do this by "defining a set of mitigation requirements which would reduce the level of risk associated with depending solely on the efficacy of inspections of large shipments of logs, lumber and other wood articles to prevent plant pest introductions." (Section IV-A.2, page 21)

However, the APHIS mitigation proposals as laid out in the FEIS and DSEIS are admitted to be individually ineffective, both by their very nature, by the inability of APHIS to effectively monitor overseas compliance and by the inability of APHIS to be able to respond effectively to anecdotal reports of infestations. In addition, invasion biology research has shown that severe biological infestations can occur from the "negligible" introduction of a small number of organisms.

For those reasons, the Coastal Waters Project urges Adoption of Alternative 6 as the only effective option to protect the forests of the Gulf of Maine region.

On page 32, APHIS notes that "Our knowledge of forest pests and the effectiveness of pest control methods used to control pest movement is replete with data gaps." but also states optimistically that " The ability to develop strategies to manage, control or even eradicate those pests becomes more likely as data gaps are filled and knowledge regarding forest pests increases."

Beyond that fact that there has never been a complete eradication of any introduced pest species, setting regulations for wood import based on a presumption that knowledge of pests and pest control will improve in the future is playing "ecological roulette" with the US' forest and agricultural resources. This is not a solid foundation for effective pest control.

APHIS attempts to unreasonably minimize Alternative 6, alternatively calling it the "most effective" and "least effective" method of preventing plant pest infestations.

On page 60 of the DSEIS, APHIS initially makes the claim that Alternative 6 "appears to be the most protective alternative analyzed in the EIS." This is based on a table (Figure 2 page 60) where APHIS ranks the alternatives on a scale of 1 to 6, "with regard to their ability to exclude pests and their environmental consequences". The ranking goes from 1: (Greatest pest exclusion and lowest likely impact) to 6: (Least pest exclusion and greatest likely impact)

Only Alternative 6, Prohibition of Importation of Unmanufactured Wood" scores a uniform "1" across all seven parameters ranked. (human health, forest resources, biodiversity, ozone, global climate change, cultural resources and endangered and threatened species.)

APHIS' Preferred Alternative (Alternative 2) is ranked as poor to moderate (3, 3, 4, 3, 3 and 3 across the seven parameters) while all other alternatives had even lower scores.

Aphis summarizes the table in part by stating that " .[A]lternative 6, which excludes importation of any unmanufactured wood articles, is the most restrictive and therefore, appears to be the most protective alternative analyzed in the EIS."

However, on Page 62, APHIS goes on to make the statement that Alternative 6 would actually be the "least effective" alternative. APHIS bases this assertion on the notion that a complete ban on the import of unmanufactured wood articles might induced increased unmanufactured wood products importation into Canada , Mexico and other Central American nations, as well as an increase in wood smuggling into the US.

APHIS asserts -

"These countries would likely have less stringent pest mitigation requirements for entry than any of the treatment alternatives presented in the DSEIS. It is probable that increased importation of wood articles into North America or Central America would result in the establishment of exotic forest pests in those countries and eventually in the United States through natural spread."

"The result in this scenario is that by not allowing the same commodity direct regulated entry into the United States, we would actually increase the probability of that pest's establishment in the United States."

However, neither of APHIS' arguments against Alternative 6 are particularly convincing, as 1) Smuggling and 'natural spread' will likely take place regardless of which alternative is chosen, and 2) Canada and Mexico will likely increase their imports of unmanufactured wood products, regardless of decisions made in the United States.

To be profitable to industry, wood smuggling would need to take place on a large scale. US paper and saw mill companies would be unlikely to decide to participate in deliberate, systematic law breaking if unfinished wood importation is banned. Small scale wood smuggling will take place regardless of which alternative is considered.

It is in their own interests for Canada, Mexico and neighboring Central American states to take advantage of the relaxation of global trade regulations to increase their imports. "Natural spread" will occur, regardless of American trade policies.

For those reasons, we feel that Alternative 6 remains the only acceptable alternative, and that any alternative but Alternative 6 will keep the threat to Northeast forests high, with the possibility for extremely high potential costs to society and the ecology of our region.

CWP/APHIS page 6 of 6

For that reason the Coastal Waters Project urges APHIS to select Alternative 6 as the simplest, most effective way to protect the forests of the Gulf of Maine region and greater United States and related ecosystems and economies from plant pest infestations..

Sincerely


Ron Huber, Director
Coastal Waters Project

16
RECEIVED
2/9/98

Memo



To: Jack P. Edmundson
From: Denny Miles, Executive Director
Date: February 2, 1998
Re: OSWA Imported Wood Products Position Statement

On November 15, 1996, the Oregon Small Woodlands Association held a board meeting at which the directors received and approved the attached OSWA position statement on imported wood products.

After the recommended statement was submitted to committee members:

Dan Newton moved that the board adopt the committee report as an OSWA Policy statement. The motion was seconded by John Rounds.

Terry Lamers noted that this policy would not apply to the adjacent states of Mexico and Canada as per existing federal regulations.

The motion passed with K.C. VanNatta abstaining.

14
2/9/98

OSWA Imported Wood Products Position Statement
As recommended by Terry Lamers, K.C. VanNatta,
Bruce Wallace, Ron Larson and Ken Faulk.

The committee members above believe that the current APHIS rules, (Animal and Plant Inspection Service, a division of the United States Department of Agriculture) that regulate the importation of wood products, are not sufficient to protect the North American resources involved in forestry, agriculture, fish and wildlife, recreation, watersheds, horticulture and tourism. We urgently implore APHIS to require more stringent mitigation measures as soon as possible, and at a minimum:

1. Treatment of the wood products in the country of origin, with a treatment that is proven effective to the full dimensions of that product, not just a surface treatment that allows many deep dwelling species to survive. Kiln drying to 71.1 C for 75 minutes at the core of the wood is the only proven method.
2. Separation of treated and untreated products, with protective measures to prevent reinfestation of treated wood.
3. Monitoring, in the country of origin, and in the U.S., by trained independent regulators that have no economic interest in the business enterprise they are monitoring.
4. More careful inspection and/or treatment of wood dunnage, pallets, and packing material that may harbor exotic pests (i.e. Asian Long-Horned Beetle).

We believe it is not possible to separate "significant" pests from the more than one million potential non-indigenous species that could be imported with wood products. Because of genetic variations of pests and hosts, different pest/prey relationships in native versus adapted countries, and because knowledge of exotic pest species is very limited, all exotic species should be treated as potentially harmful.

14

17
3/9/98

Safe Alternatives for our Forest Environment
P.O. Box 1297 Hayfork, CA 96041-1297

Mr Jack P Edmundson
Environmental Protection Officer
Policy and Program Development, APHIS
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr Edmundson.

Safe Alternatives for our Forest Environment (SAFE) has the following comments to make on the Draft Supplemental EIS concerning imports of logs, lumber and other un-manufactured wood products

Many types of pests can be imported into this country via importation of logs, lumber and other un-manufactured wood products. Existing systems, designed to prevent the importation of pests from other areas, have not been adequate to stop this pest migration

Dutch Elm disease, Chestnut blight, and white pine blister rust are just a few forms of disease that have entered this country from nations separated by oceans. So called "killer bees" are becoming a problem in North America because of the escape of an importation of the bees into South America. The killer bees were imported from Africa. We can not stop pests from crossing borders from state to state any more than we can stop pests from crossing border to border, but we do not have to provide the trans-oceanic transportation for them. Many obnoxious pests, plant and animal have come into this country via products, or transport services from another country, and have established themselves here, i.e. yellow star thistle (*Centaurea solstitialis*), zebra mussel *Dreissena polymorpha*, water flea, *Bythotrephes cederstroemi*, river ruffe, *Gymnocephalus cernuus*, and the Japanese beetle represent but a few pest plant and insects imported into this country via products from across the oceans

Whole logs, and lumber can carry a number of different types of insects, fungi or disease not readily visible to inspectors. Pesticides and other methods have not proven to be capable of controlling infestations of many different species. By now billions of gallons of pesticides have been used upon insects and plants such as fire ants, mosquitos, hair lice, boll weevils, grasshoppers, crab grass oxalis, star thistle, etc. They are still with us, so are the problems they cause, and the problems caused by pesticide use

Many of the world's forests have already been devastated from poor forest management and practices, coupled with the desire to increase profits with little regard for the environmental consequences. Those poor management practices and the same desire for profit will certainly not be curtailed by legislation, particularly when there is a plethora of regulations and a dearth of meaningful enforcement in the area of environmental laws and protections

The draft EIS lacks adequate safeguards to protect our forests from the high risk of importing

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18

RECEIVED
2/19/98

Mr. Jack P. Edmundson,
Environmental Protection Officer, Environmental Analysis and
Documentation, Policy and Program Development, APHIS, 4700
River Road, Unit 149, Riverdale, MD 20737-1238

February 5, 1997

In Re: Comments on the Draft Supplemental EIS concerning the imports of
logs, lumber, and other unmanufactured wood articles

Attn: the Animal and Plant Health Inspection Service (APHIS), the
division of the USDA responsible for preventing the importation into the
U.S. of harmful insects, fungi, and diseases that could harm our forests

The goal must be the prevention of the importation of pests that
could harm our native plants. We understand that APHIS has issued a new
DSEIS because of a lawsuit which resulted in a court halting the issuance
of new permits under the regulations until a new environmental impact
statement is completed. We understand that the original EIS had three
flaws: 1) it assumed that individual measures that are ineffective
individually will be effective when applied collectively; 2) it omits
important factual information concerning uncertainties in risk
assessments, control measures, compliance, and human health impacts of
pesticides used in eradication efforts; 3) it provides an inadequate
comparison of alternatives.

We think that it is very important that APHIS prepare a more
complete EIS and, most importantly, to strengthen its regulations. The
future ecological health of our forests depends on APHIS maintaining an
effective barrier to the introduction of new pests in the face of the
danger presented by expanding trade. As you know, many kinds of pests
can travel here on logs or other kinds of "raw" or unmanufactured wood.
Log imports brought the fungus which caused the "Dutch" elm blight (in the
1930s). Scientists in Oregon have found evidence of fungal and insect
infestations in imported railroad ties which the regulations allow into the
country with virtually no processing.

We are concerned that APHIS' new DSEIS fails to rectify the
weaknesses in the earlier EIS nor does it adequately address new
information. Most important, APHIS must strengthen its regulations.

disease and pests that are destructive of our forests. Because of massive clear-cutting, use of
pesticides, mono-culture and other poor forest management practices of the past, we have already
decreased the populations of many beneficial predatory insects and birds, reducing our existing
natural defenses. To import exotic species, to which there many not be any existing natural
control, (as there may be in the exporting country), is to increase the burden on our already over-
stressed forest eco-systems

The draft EIS does not adequately address the issue of enforcement of regulations. Our nation has
a poor history of environmental regulation enforcement. This fact is established in the number of
cases environmental groups have had to file in order to get various government agencies
themselves to comply with regulations, and in the number of law suits these same groups have
been forced to file against large corporations to compel them to follow existing laws. In fact, it
took a lawsuit to address the inadequacy of the original EIS. There is a lack of confidence in our
existing agencies' abilities to provide the necessary protections of our natural resources. Much of
this inability can be attributed to political interference with agency heads, budget restraints, lack of
training, and the purposeful creation of legal loopholes by members of Congress, the existence of
which the general populace is often unaware. While we can not expect the agencies themselves to
change these problems, the public has a right to expect that regulations will be written in such a
manner that they are clearly enforceable, and designed to protect our resources and the public's
interests, not private investor interests first

Sincerely,



Bill Welsch
President. SAFE

For example, insects imported into Great Lakes ports on wooden packing material include the pine shoot and spruce beetles. It also makes no sense that solid wood packing material and loose packing material are allowed from the "Asian" region when logs and lumber must undergo such stringent treatment regimes, packing material has carried lots of pests to the U.S.. Also still persisting is the uncertainty of the effectiveness of pre-import heat treatment because of the difficulty of keeping wood strictly sealed afterward, and the difficulty of APHIS verifying compliance or effectiveness of post-import heat treatment or processing when there are 30 - 60 day delays which allow insects and fungi to mature and escape.

Additional concerns are the failure to update ratings of effectiveness of mitigation measures such as failure to debark packing materials, failure to discuss weaknesses of inspection as a mitigation measure and inadequate comparison of alternatives, including inadequate economic analysis.

APHIS' still does not explain its reasons for rejecting outside experts' scientific judgments. In our view, APHIS places too little importance on its principal mandate, preventing the introduction of potentially harmful alien pests and too much emphasis on facilitating trade, even at the expense of reduced effectiveness of its phytosanitary measures. This misguided stance is particularly alarming because the risk of damaging invasive alien organisms reaching our shores on log and other raw wood imports is growing along with the expansion of trade in both logs and a vast variety of other products contained in raw-wood packing materials.

The facts on the record call for significant strengthening of the regulations such as requiring heat treatment for all imports of logs, lumber, whole or portions of a tree, railroad ties, hog fuel, sawdust, painted raw wood products, pickets, stakes, shingles as well as debarking and kiln drying of wood used for wooden packing material. Raw wood exports destined for the U.S., including wood packing material, should be inspected by the phytosanitary agency of the exporting country and certified as free of live pests; APHIS should stop relying on shippers' own declarations. APHIS should also amend its own procedures to take a more precautionary approach when confronted by a pest on which little information is available on its potential for establishment and spread.

It is very necessary for APHIS to strengthen the steps it will take to penalize knowing and inadvertent violations of its regulations by both individual exporters/importers and by exporting countries. These measures are needed to insure the health and safety of our nation's forest and plant life.

Sincerely,



Gwen Marshall
Protect Biodiversity in Public Forest Network
243 Parkway #3, Cincinnati, Ohio 45216



Dr. Victor G. Soukup
President Ohio Native Plant Society
338 Compton Rd, Wyoming, Ohio 45215

(19) 2-0-8-10C


February 2, 1998

Mr. Jack P. Edmundson
 Environmental Protection Officer
 Environmental Analysis and Documentation
 Policy and Program Development, APIIS
 U.S. Department of Agriculture
 4700 River Road, Unit 149
 Riverdale, MD 20737-1238

Dear Mr. Edmundson:

We have reviewed the Supplemental Environmental Impact Statement for the importation of Logs, Lumber, and other Unmanufactured Wood Articles. The threat to Oregon's forest resources from imported pests is very real to us given the proximity of many ports and mill operations to forestlands. Current regulations do not adequately address our concerns with the growing quantities of wood imports, the inadequacy of inspections at ports of entry, and the limited effectiveness of available treatments on a broad range of pests. We believe Alternatives that rely on methyl bromide fumigation to mitigate pests are short sighted given uncertainties regarding its effectiveness on deep wood pests, human health concerns, environmental effects, and future availability. The addition of a new Alternative offering full mitigation at the port of origin, using heat of treatment of wood, and the use of protectants to avoid reinfestation of shipments, would represent a "best practice" for pest exclusion.

Our comments on the specific areas the Federal District Court found deficient in the July 1994 Environmental Impact Statement paralleled our previous concerns. The assumption by APIIS that the collective effect of individually ineffective control measures will be effective becomes less and less plausible as the quantities and piece size of imported wood increase. Ship loads of logs and chips cannot be adequately inspected, and present pest mitigation treatments are not adequate. There is a clear need for research and development directed at effective pest mitigation methods for large shipments of wood.

The omission of significant information regarding the uncertainties in the pest risk assessment is adequately addressed by the December 1997 Draft Supplement. We favor expending more resources to insure compliance with APIIS regulations in the exporting countries and development of an alternative to methyl bromide fumigation

Mr. Jack P. Edmundson
 Page 2
 2/2/98

The ideal replacement for methyl bromide is a treatment using heat or radiation that kills insects, nematodes, and plant pathogens deep inside wood. Development of a more effective treatment than methyl bromide would go a long way toward reducing the threat of introduced pests, and eliminate other uncertainties cited in the Draft Supplement.

The comparison of the Alternatives found in the Draft Supplement is an improvement over the original Environmental Impact Statement. One clear weakness in the list of Alternatives is the dependence of the treated wood option on the continual use of methyl bromide, a material that other agencies within the Federal government are attempting to ban. As discussed earlier, we favor the addition of an Alternative involving heat treatment of wood shipments at the port of origin.

In summary, we feel the 1997 Draft Supplement does clarify important aspects of the 1994 Environmental Impact Statement. We still have great concern with the continued reliance on methyl bromide to treat imported wood. Also, current regulations are inadequate as regards the inspection and treatment of large shipments of logs and chips. If large quantities of imported wood continue to flow into the United States, APIIS should focus on regulatory compliance at the port of origin as the preferred strategy for preventing the entry of exotic pests.

Sincerely,


 Dave Overhulser
 Entomologist

DO/hlb
 cc Dan Hilburn - ODA



the Northcoast Environmental Center

February 9, 1998

Jack Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Rd. Unit 149
Riverdale MD 20737-1238
FAX 301/784-3640
(4 pages.)

RE: "Draft Supplement to the Environmental Impact Statement,
Importation of Logs, Lumber, and other Unmanufactured Wood
Articles, December 1997."

Dear Mr. Edmundson:

Thank you for this opportunity to comment on this albeit obscure but critical matter of environmental concern--the importation of exotic and invasive plant and animal species. We are faxing these comments directly to you to insure their timely arrival, and sending copies via express mail.

We are concerned that the Draft Supplement to the Environmental Impact Statement (hereafter SEIS) fails to adequately address our original concerns for the unintentional importation of exotic organisms into North America.

In thirty years of environmental work here in the Redwood and Klamath-Siskiyou Regions, we have observed the large toll that exotic and invasive species have had on the temperate rainforest ecosystem.

Numerous plant species have taken root on disturbed forest lands, including, for example, pampas grass (*Cortaderia jubata*). Pampas grass can

879 NINTH STREET • ARCATA, CA 95521
(707) 822-6918 (KEEP TRYING)

NEC TO APHIS, RE: SEIS, February 9, 1998, Page 2.

grow from a one to two foot young plant to as tall as eight feet in one season. Mature plants can reach 20 feet, and in many areas of coastal California *C. jubata* is considered to be a serious threat to many native plant species. In second-growth clearcuts on coast redwood forest land, pampas grass now covers tens-of-thousands of acres in North Coastal California.

The California Native Plant Society (CNPS), a member group of the Northcoast Environmental Center, considers this plant species to be but one of a host of exotic plants that threaten California's unique heritage of native plant biodiversity. CNPS undertakes widespread volunteer control efforts to try to protect rare plant communities from these pests. While their struggle is one of heroic proportions, the prognosis for their long-term success is in doubt unless more financial and regulatory commitment is forthcoming from the government. Given the competition for tax dollars, the future of large-scale control programs are speculative at best.

While *C. jubata* may not be a species that was imported on a raw log or unmanufactured wood article, it is a fine example of the large scale effect of exotic invasive species.

In another case of regional concern, the Port-Orford-cedar (*Chamaecyparis lawsoniana*) has been attacked by a fatal root rot that was introduced in the 1920s. Now the disease, that once largely affected only ornamental Port-Orford-cedar in public parks and gardens, has gradually but steadily spread into the heart of its range. The tree, its wood the most commercially valuable in the region, is also endemic to the forests of the Klamath-Siskiyou region. Since the disease is fatal, we here have been faced with witnessing its decline.

Our efforts to get the U.S. Forest Service (an APHIS sister agency in the Department of Agriculture) to explain the efficacy of its program to protect the Port-Orford-cedar have yet to bear results even after more than a decade effort.

So this recounting is of our decades of experience in seeing exotic organisms alter the fundamental nature of the forests in our immediate surroundings, while also seeing substantially ineffectual control efforts fail.

The SEIS's favor for a "combination" control measure preferred alternative, for governing importation of potential host materials, doesn't resonate with us as being reasonable. Risk assessment work must be done that more accurately portrays the odds of success. We don't see such risk assessment

NEC TO APHIS, RE: SEIS, February 9, 1998, Page 3.

work reflected in the SEIS.

Since and during the time APHIS undertook to prepare this SEIS, several outbreaks of exotic Eurasian forest pests have occurred in the U.S. Perhaps the most notable of these involves the Asian long-horned beetle. The beetle's attack made the news when 700 stately street trees along a New York expressway were cut down in an effort to stop the pest species from becoming established. We have been told that this pest species was also found in a New England port, and also on some wood packing material on a shipment of steel on a boat at harbor in Southern California.

The SEIS fails to discuss what happens when the shippers of goods in a foreign country fail to follow the rules. I have seen studies that suggest that suggest that a certain number of people in a given system of rules, laws or regulations will choose to not abide by those rules. The SEIS could have picked plausible numbers for noncompliance and plugged them into scenarios for possible infestation and discussed the environmental consequences, but I don't find that discussion in the SEIS.

Nor does the SEIS discuss and evaluate the social and health costs associated with a control program when an outbreak does occur. The medfly outbreak and subsequent control effort in central California in the late 1970s comes to mind as a practical example. Socially, the control effort in the San Francisco Bay area, caused upheaval and more long-term mistrust of the government following in the wake of the night-time aerial spraying of poison baits over a densely populated area. Our office manager, who was a child living in San Jose during the medfly sprayings, still holds the politicians accountable 20 years later. How do we ever account for the health effects from toxic control programs over the long-term, how can we possibly monitor the vast array of toxic assaults that any individual may receive over a lifetime?

Lastly, the SEIS should have evaluated the differing environmental impacts of its alternatives in a comparative manner. The decision maker should be well enough informed by the NEPA process so as to have at least the opportunity to make the decision that is most benign for the environment.

The loss of biodiversity globally is a serious problem, and one that must be addressed at all levels, from local to global. In the Redwood Coast and Klamath-Siskiyou regions specifically, and the whole of the Pacific Northwest, a century of intensive landuse has left large landscapes of disturbed terrains that are all at once wounded critical habitat for endangered species and fertile ground

NEC TO APHIS, RE: SEIS, February 9, 1998, Page 4.

for aggressive plant and animal invaders.

Many of the leading biologists, ecologists and other scientists believe that the loss of biodiversity is one of the most pressing issues globally. We have yet to experience the same sense of urgency in the public agencies, payed and empowered to protect the public trust values of biodiversity and habitat protection.

If it weren't so late in the game of species and habitat protection, then we might find more citizens who would be willing to support an untested plan with the assurance, "Trust us we're from the governments."

Thank you again for the opportunity to impress upon you that importation of exotic and invasive plant and animal pest species can be a devastating occurrence for the endangered forest ecosystems of the Pacific Northwest

The Northcoast Environmental Center is a non-profit Tax-exempt educational organization dedicated to illuminating the links between humankind and the biosphere. The Center's approximately 4,000 members live throughout the range of the Port-Orford-cedar, and around the world.

Sincerely,



Tim McKay, executive director.

TM/me

CC: Mike Axline Western Environmental Law Center

Senator Mike Thompson

Assemblywoman Virginia Strom-Martin

PERC

ONRC

CATS

Congressman Frank Riggs

Senators Dianne Feinstein and Barbara Boxer

(21) 2/19/98



New Zealand Forest Industries Council

85 THE TERRACE, LEVEL 4, PO BOX 2727, WELLINGTON, NEW ZEALAND
PHONE: 64 4 473 9220 FAX: 64 4 473 9330

aphisaeis

9 February 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development
Animal and Plant Health Inspection Service (APHIS)
US Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238
USA

Fax 001 301 473 3640

Re: APHIS - Draft Supplement to the Environmental Impact Statement,
December 1997

This submission is made by the New Zealand Forest Industries Council (NZFIC) in response to your agency's publication entitled "Importation of Logs, Lumber and other Unmanufactured Wood Articles - Draft Supplement to the Environmental Impact Statement" (SEIS), dated December 1997.

1. Background

NZ forest industry interest and concerns:

NZ forest industry: The NZ forest industry is based on an expanding planted production forest resource (currently at 4.0 million acres, but annually increasing by 180,000 acres) and will undergo significant growth over the next 15 years. Most notably its annual harvest will more than double (to an equivalent of 14.8 billion board feet of saleable timber per annum) with all additional material available for customers in Asian-Pacific markets.

US industry and market links. The US is an important and expanding market for NZ forest products, Kiln Dried Timber (KDT) and manufactured wooden products in particular. The US is NZ's fourth largest forest products market, currently at around

\$ 140 million in annual export sales (year to September 1997). It is NZ's third most important market for lumber and value added wood manufactures, with imports of around \$ 90 million (KDT represents nearly 90 % of this total).

The US forest industry has invested heavily in NZ forest growing and processing operations over the past 7 years. The export of semi-finished and finished wood products to the US market to meet expanding US industry and consumer demand is a major driver of current and future market growth.

Concerns: The NZ forest industry has a number of serious concerns about the US District Court for the Northern District of California's injunction enjoining APHIS from issuing new permits for importation of unmanufactured, non-tropical wood products from NZ into the US. These were discussed in detail with US officials by a NZ/US forest industry delegation which visited Washington DC on 22-23 September 1997 and noted in the NZ forest industry's submission to APHIS on the proposed scope of the SEIS (NZFIC submission dated 24 September 1997).

In summary these concerns are:

- the injunction does, in effect, create a non-tariff barrier by restraining new business developing between NZ suppliers and US customers not in possession of import permits prior to 5 June 1997. We have quantified economic impact on NZ companies under item 3 and Appendix A of this submission
- the apparent inconsistency of the District Court ruling with (i) negotiated commitments between WTO members (including the US and NZ) under the WTO's SPS agreement, (ii) the 1995 Rules covering importation of unmanufactured wood articles into the US market, (iii) the July 1994 Environmental Impact Statement (EIS) and (iv) the 1994 Pest Risk Assessment of NZ conducted by APHIS
- the discriminatory impact of the District Court ruling which targets imports from NZ but not unmanufactured wood product imports from Canada or Mexico or unmanufactured tropical timber wood products which, arguably, pose a similar, or in some cases potentially worse, quarantine risks
- the distorting impact of the injunction on the US market place by, potentially, (i) increasing the economic power of existing permit holders, and (ii) undermining NZ market share through product substitution from sources not covered by the injunction
- the inclusion of KDI by the District Court in the products covered by its ruling when the biosecurity risk posed by this high-heat treated product is negligible
- the precedent this court case may set for ongoing or future distortions of wood products (or other primary based products) trade into the US (or other) markets through this type of injurious legal action by NGO's

2. Comments on Draft Supplement to EIS

A NZFIC task group has analysed the SEIS.

Additional data: The additional and extensive technical detail provided by APHIS in the SEIS has been noted. This data largely relates to the three areas of deficiency outlined in the court ruling but further new information – concerning a GAO audit of inspection services, suppression and eradication strategies, methyl bromide use and new wood treatment techniques – has also been included into the SEIS.

Compliance by exporting countries (pp 33-42): The NZ forest industry appreciates the need for robust quarantine systems. NZ's own strict biosecurity regime – to ensure its primary industries, including forestry, operate in a pest free environment and can meet the specific phytosanitary requirements of its many export markets – is highly pertinent in this context.

NZ exporters of unmanufactured wood products to the US do comply with the 1995 Rules. Specific processing requirements relating to logs, raw lumber and heat-treated lumber – as set by APHIS in regulation 319.40-5 – have been incorporated by the NZ Ministry of Forestry into procedure manuals which are used by the NZ forest industry. Individual NZ companies, in turn, incorporate these US market requirements into their day-to-day company operating procedures.

The NZ Ministry of Forestry ensures US importation requirements are met through pre-shipment port inspections for wood products requiring a phytosanitary certificate (eg logs) and by training industry site inspectors on US procedures for products not requiring a certificate (eg. KDT). The Ministry of Forestry regularly audits NZ suppliers on their compliance with US production procedures.

Risk of non-compliance (page 41): We suggest the data provided on APHIS inspection and civil penalties be put into some form of overall context regarding total US import levels and border surveillance activity.

Adequacy of current Rules: It is our view that this data supplied by APHIS in the SEIS fully substantiates the efficacy of the existing 1995 Rules for the importation of logs, lumber and other unmanufactured wood articles into the US. It is our contention that these Rules – in combination with the EIS, SEIS and the APHIS Pest Risk Assessment of NZ – provide an adequate regulatory framework to manage the importation of wood products from NZ to meet expanding US customer demand, while providing robust quarantine protection and pest eradication measures.

Conclusion: It is our strong conclusion, based on the above points, that the current injunction on the issue of permits should be lifted, thereby removing this non-science based and discriminatory barrier to trade.

3. Economic impact

NZFIC has surveyed NZ wood product exporters to the US in order to determine the economic impact of the injunction since 5 June 1997. The survey indicates that some NZ companies – and consequently their US customers – have been affected by the injunction in a number of ways viz

- lost sales caused by new US customers inability to obtain import permits
- lost sales caused by existing US customers inability to get extensions or alterations to existing permits (eg port of entry)
- potential threat of lost sales caused if US customer's permit expires and is not renewed
- increased distribution costs incurred in order to service existing US customers with permits specifying an entry port not directly serviceable from the exporters location

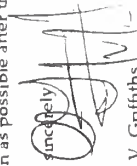
On an annualised basis, the economic cost of the injunction to NZ companies – in terms of lost sales, increased cost or threatened sales – is estimated at \$15-21 million. Details of the survey are attached as appendix A.

It should be noted the "downstream" impact of the injunction on US companies – which add value to the wood product imports prior to on selling to "final" American consumers – is far greater than this figure. We feel it is also worth noting that this economic cost is largely being "jointly" borne by small to medium sized NZ and US companies.

To conclude on economic impact, it is important to note again that should the injunction remain in force, then the market power of existing permit holders will increase. Clearly the creation of this "unnatural" advantage by the District Court ruling is not in the best interests of the NZ or US forest product industries or US consumers. Furthermore, the current volatility of a number of Asian forest product markets underlines the need for the NZ forest industry to eliminate impediments to business development in important markets such as the US.

Thank you for the opportunity to comment on the SEIS. The NZFIC looks forward to a satisfactory conclusion to this issue and, based on the additional data contained in the SEIS, anticipates the injunction on import permits will be lifted by the US District Court as soon as possible after the 15 May 1998 report back meeting.

Yours faithfully



James V. Griffiths
Chief Executive
New Zealand Forestry Industries Council



dogwood alliance

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(704) 877-5865
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February 9, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Policy and Program Development
APHIS
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Draft Supplemental Environmental Impact Statement on Importation of Logs, Lumber, and Other Unmanufactured Wood Articles

Dear Mr. Edmundson:

The Dogwood Alliance welcomes the opportunity to comment on the Draft Supplemental Environmental Impact Statement (DSEIS) on Importation of Logs, Lumber and other Unmanufactured Wood Articles.

The Dogwood Alliance is a coalition of 40 grassroots community groups and organizations from 14 states in the Eastern US working to protect the region's native forests and local forest-dependent economies. Members of the Dogwood Alliance recreate in, own and/or engage in economic activity in, forests that face a risk of infestation with plant pests introduced with imported wood products.

Nonindigenous species have caused significant damage to US forests. Several economically important native tree species, particularly the American chestnut and elm have been almost completely eliminated, the former by imported chestnut blight, the latter by Dutch elm disease.

Because of the significant risk of large scale environmental and economic harm to the forest resources of our region from the introduction of exotic animal, plant and microbial species incidental to the importation of unmanufactured wood products, the Dogwood Alliance strongly urges the Animal and Plant Health Inspection Service to develop and implement genuinely effective phytosanitary regulations.

However, because the information supplied in the FEIS and the DSEIS, and substantive information elsewhere, suggests that all alternatives that allow any importation of unmanufactured wood products, including packing materials, will result in the introduction and

transmission of plant pests into the forests of the Southeast, the Dogwood Alliance firmly urges the adoption of Alternative 6 "Prohibit importation of unmanufactured wood".

GENERAL COMMENTS

The purpose of this Supplemental Environmental Impact Statement is to address deficiencies in the 1994 FEIS by providing substantive information to decisionmakers to guide the development of regulations to prevent such introductions. We believe that it does so, but in a way supportive of Alternative 6, not the APHIS Preferred Alternative.

APHIS states in its Introduction to the DSEIS that "The sole function of these proposed regulations is to protect U.S. natural resources from the potentially devastating effects of introduced plant pests." (page 4)

To carry out this objective APHIS has proposed six alternatives:

- Alternative 1: No Action
- Alternative 2: Wood importation regulations (preferred)
- Alternative 3: Prohibit importation of Untreated Wood except Packing Materials
- Alternative 4: Prohibit importation of Untreated wood
- Alternative 5: Prohibit importation of Unmanufactured wood except for packing materials
- Alternative 6: Prohibit of Unmanufactured Wood

APHIS acknowledges in the DSEIS that Alternatives 1-5 will all result in the introduction and transmission of plant pests, with potentially devastating effects. It cites a US Forest Service study that estimates direct timber losses to the United States from plant pests introduced in the course of unmanufactured wood importation infestations as high as \$38,000,000,000: 58 Billion dollars.

Nonetheless, APHIS continues to hold that:
"Measures can be taken to reduce the probability of pest infestation to a negligible level, and thus, maintain the value of the wood product" (Section IV-A). APHIS proposes to do this by "defining a set of mitigation requirements which would reduce the level of risk associated with depending solely on the efficacy of inspections of large shipments of logs, lumber and other wood articles to prevent plant pest introductions." (Section IV-A 2). However, the mitigation requirements that APHIS proposes to draw from have been shown to be individually ineffective, both by their very nature, and by the inability of APHIS to monitor compliance with the requirements by overseas exporters. For those reasons, alternative 6 is the only option that will have a strong likelihood of protecting our forests.

ALTERNATIVE 6

APHIS calls Alternative 6, "most effective" and "least effective." The DSEIS initially makes the claim that Alternative 6 "appears to be the most protective alternative analyzed in the EIS." In Figure 2 (page 60) APHIS ranks the efficacy of the six alternatives "with regard to their ability to exclude pests and their environmental consequences." The Alternatives were ranked on a scale of 1 to six, from 1 (Greatest pest exclusion and lowest likely impact) to 6 (Least pest exclusion and greatest likely impact).

11

6

- "It assumes without examination that individually ineffective control measures will be effective collectively."
- "It omits significant information concerning uncertainties expressed in the risk assessments, concerning compliance by exporting countries, and concerning the health consequences of measures to manage infestations that may occur, and"
- "it fails to discuss adequately the different environmental impacts of the various alternatives."

None of the three objections raised by the Court are fully answered, the threat to Southeastern forests remains high. Should the preferred alternative or any alternative other than alternative 6, be implemented by APHIS, the costs to society and to the forest ecosystem could be extremely severe.

For that reason the Dogwood Alliance urges adoption of Alternative 6 as the simplest, most effective way to protect the forests of the Southeast and greater United States, and the ecosystems and economies that rely upon them.

Sincerely,



Donna Smith
Network Coordinator



Ron Huber
Steering Committee

Only Alternative 6, Prohibition of Importation of Unmanufactured Wood" scored a uniform "1" across all seven parameters ranked (human health, forest resources, biodiversity, ozone, global climate change, cultural resources and endangered and threatened species.)

Under the same ranking, APHIS' Preferred Alternative (Alternative 2) was ranked as poor to moderate (3, 3, 3, 4, 3 and 3 across the seven parameters) while all other alternatives had even lower scores.

On page 61, following the ranking chart, Aphis summarizes the table in part by stating that "[Alternative 6, which excludes importation of any unmanufactured wood articles, is the most restrictive and therefore, appears to be the most protective alternative analyzed in the EIS."

The Dogwood Alliance concurs with the statement and urges the adoption of Alternative 6 For above reason, we believe that Alternative 6 is the only appropriate alternative to consider.

However, on Page 62, APHIS goes on to make the statement that "In practice, alternative 6, which was ranked as the most effective alternative for excluding pests, might prove to be the least effective at reducing the risk of plant pest introduction. Total prohibition of unmanufactured wood articles might result in a change in international trade routes for wood products into other countries in North America or Central America or smuggling if items into the United States."

"These countries would likely have less stringent pest mitigation requirements for entry than any of the treatment alternatives presented in the sets. It is probable that increased importation of wood articles into North America or Central America would result in the establishment of exotic forest pests in those countries and eventually in the United States through natural spread. The result in this scenario is that by not allowing the same commodity direct regulated entry into the United States, we would actually increase the probability of that pest's establishment in the United States.

Neither of APHIS' two arguments against Alternative 6 are convincing

- 1) There is no reason to believe that smuggling and 'natural spread' will not take place regardless of which alternative is chosen

To be attractive to industry, smuggling into the United States would have to be on a large scale. There is little likelihood that the US paper and saw mill industry would be willing to engage in deliberate, systematic law breaking if unfinished wood importation is prohibited. Small scale wood smuggling will likely take place regardless of which alternative is considered.

- 2) There is no reason to believe that Canada and Mexico will not increase their imports of unmanufactured wood products regardless of decisions made in the United States. Both nations have a history of wood imports; both nations will likely take advantage of the general relaxation of global trade restrictions to increase their imports. "Natural spread" will occur, regardless of US trade policies.

For those reasons, we feel that Alternative 6 remains the only acceptable alternative.

In "ONRC v APHIS, CATS v APHIS" decision filed February 2, 1997 the Court found the Environmental Impact Statement, (that the present DSEIS supplements), to be inadequate for the following reasons.

INTERNATIONAL PAPER

23



Kenneth R. Munson
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February 9, 1998

Mr Jack Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

RE: APHIS Supplemental EIS (SEIS)

Dear Mr Edmundson:

This letter is to express International Paper Company's overall support for the SEIS. We applaud APHIS for taking the initiative to protect the nation's forests and support this endeavor fully. Additionally, International Paper agrees with all points made by the American Forest & Paper Association in their response to the SEIS. It is squarely in the best interest of International Paper and the forest products industry to maintain healthy, productive forests for generations to come.

The SEIS covers very well the three deficiencies found by the court. The issue of effectiveness of control measures is addressed with good technical rationale and interpretation of technical literature. The discussion of uncertainties in the risk assessment and control measures, compliance by exporting countries and human health effects of control measures is thorough. The vast array of risk and health assessments contained in previous EISs and referenced in the SEIS is a solid foundation to address those issues. The approach to comparing alternatives is reasonable and adequately weighs effectiveness among the alternatives.

We would like to offer some additional supporting material. The attached documents support the issue of compliance by exporting countries, in this specific example, New Zealand. New Zealand has well developed exporting requirements and strives to assist exporters in meeting other countries import restrictions. These materials are extracted from the 1994 New Zealand Ministry of Forestry publication titled "Exporting Lumber and Remanufactured Products to Australia and the US." Included are the following chapters:

Mr Jack Edmundson
February 9, 1998
Page Two

Chapter 12, Export Documentation
Chapter 15, Ministry of Forestry Certification and Quality Assurance Program
Chapter 16, Exporting and New Zealand Customs
Appendix 1, Examples of Export Documents

This information reinforces the SEIS in regards to compliance by exporting countries. A review of the New Zealand documents clearly reveals a high degree of control over the export process by NZ standards. These complement and dovetail very well with APHIS requirements. In combination, the two systems protect against the risk of pest infestations. We respectfully suggest that the SEIS include these materials in the appendix as an example of additional control measures of protection from exporting countries.

APHIS has provided a sound scientific and technical basis for its risk analysis and regulations regarding importation of non-manufactured wood products. A sound science based approach is essential to assure against unwarranted disruptions of trade flows and trade-related challenges to the procedures used to protect against pest and disease.

In conclusion, we believe the APHIS team responsible for drafting the SEIS should be commended for such a thorough and timely job. We encourage the APHIS team managing this issue to continue to push the process to completion and implementation and we believe the SEIS addresses the concerns raised by the court sufficient to warrant lifting the injunction against new import permits.

Sincerely,

Kenneth R. Munson
Manager, Forest Productivity & Research

DATA/SEH Edmundson

<p>STATE OF CALIFORNIA</p> <p>DEPARTMENT OF FOOD AND AGRICULTURE</p> <p>1220 N Street, Room A-372 Sacramento, CA 95814 (916) 653-1440</p> <p>February 9, 1998</p> <p>Mr. Jack Edmunson Environmental Protection Officer Environmental Analysis and Documentation PPD/APHIS/USDA 4700 River Road, Unit 149 Riverdale, MD 20737-1238</p> <p>Dear Mr. Edmunson:</p> <p>Thank you for providing the draft supplemental environmental impact statement regarding the importation of logs, lumber, and other unmanufactured wood products for our review.</p> <p>In September 1997, the department provided comments to the notice of intent requesting that APHIS specifically address the following points in the supplemental draft:</p> <ul style="list-style-type: none"> • Describe the methodology for the systems approach; • Describe the degree of uncertainty present in the risk assessments particularly as it relates to the adequacy of the control measures; • Describe the rationale used to extrapolate the risk and mitigation strategy for plantation grown green lumber from New Zealand and Chile to all green lumber; • Describe the rationale for the mitigation chosen for green hardwood lumber; and, • Describe why solid wood packing material associated with unregulated cargo is unregulated while the same material accompanying regulated material is likewise regulated. <p>These points did not appear as part of the Summary of Public Comment From the Notice of Intent, but these are important outstanding issues which need to be addressed. Comments specific to the draft follow</p> <p>Pages 2-3. It should be clearly noted here and elsewhere in the document that unlike the Siberian pest risks assessment, the New Zealand and Chilean risk assessments were pathway-initiated. This is necessary to clarify the point that the validity of the assessed risk is dependent upon the pathway-associated activities.</p> <p>Pages 4-5. Within the past ten years, APHIS has promulgated two new domestic regulations for primarily forest pests: pine shoot beetle, and Asian longhorned beetle. It would be appropriate to include a discussion of these pests, and perhaps the discovery of and status of <i>Ips typographus</i> within the historical perspective, to more clearly illustrate the problem of pests entering via untreated and unprocessed wood products.</p>	<p>24</p> <p>2/9/98</p> <p>Mr. Jack Edmunson Page 2 February 6, 1998</p> <p>Page 8. Within the last paragraph, "under current conditions" should be rewritten to reflect the requirements of the regulation. The "No Action" alternative is not the current situation</p> <p>Page 9. Within the discussion of Alternative 2, it states that "in all cases in which APHIS has identified a risk of plant pest introduction" there is a requirement for a plant pest treatment. This is not entirely true. Within the regulation, APHIS is requiring mitigation treatments where the pest risk has not been adequately or accurately assessed, i.e., the requirements for softwood and hardwood lumber. No risk assessments have been performed for crossie lumber, these requirements, different from those for other dimension lumber, were essentially "grandfathered" into the regulation. Yet APHIS is not yet requiring mitigation for dunnage accompanying unregulated cargo even though the risk of additional Asian longhorned beetle introductions has been clearly identified; port inspectors have been instructed to carefully inspect these items when arriving from China, and several additional interceptions have been made.</p> <p>Although all regulated articles are indeed subject to inspection on arrival, in fact, these inspections are difficult and limited. This should be clearly stated here so that the reader isn't misled as to the adequacy of this requirement, particularly since its inadequacy is stated very clearly on pages 13 and 67-70. Currently this represents a contradiction in the document. And this discussion on page 13 should be expanded to disclose that most of these inspections are limited to a review of the paperwork and/or a "tailgate" inspection.</p> <p>Page 10. As the economic analysis was unavailable when the EIS was published, it would be helpful if it was attached to this document as an appendix rather than just being summarized here. Additionally, if the costs to control end/or eradicate pine shoot beetle and Asian longhorned beetle are not considered within the economic analysis, it should be revised accordingly so that the net welfare impact is accurately assessed, it would also be helpful to attach the GAO Audit referenced on page 67 as well.</p> <p>Page 11. The risk estimate for larch canker found within the Siberian larch risk assessment is mentioned here, but I have been told that APHIS is currently conducting a pest risk assessment for larch canker to determine if the agency will repeal this domestic quarantine. If this is indeed the case, this should be mentioned here.</p> <p>Environmental Analysis</p> <p>Point 1-Efficacy of Combinations of Methods, pages 19-27.</p> <p>Here the philosophy, rationale, and methodology for the systems approach should be clearly and thoroughly discussed. Then, its use and adequacy as a mitigation strategy for this regulation should be assessed as it compares and meets the intent of this approach. In other words, whether or not the systems approach is an effective pest risk mitigation strategy should stand alone and not be based upon the way it is applied within this regulation. Its use as a mitigation strategy for the regulation should be discussed separately. And, the extended discussion here in the introduction, and under Potential Future Imports, of the problems</p>
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Mr. Jack Edmunson

Page 2

February 6, 1998

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Environmental Analysis

Point 1-Efficacy of Combinations of Methods, pages 19-27.

Here the philosophy, rationale, and methodology for the systems approach should be clearly and thoroughly discussed. Then, its use and adequacy as a mitigation strategy for this regulation should be assessed as it compares and meets the intent of this approach. In other words, whether or not the systems approach is an effective pest risk mitigation strategy should stand alone and not be based upon the way it is applied within this regulation. Its use as a mitigation strategy for the regulation should be discussed separately. And, the extended discussion here in the introduction, and under Potential Future Imports, of the problems

Mr. Jack Edmunson
Page 3
February 6, 1998

associated with inspection alone as a mitigation tool is distracting and irrelevant to the effectiveness of a systems approach.

Under 3. Risk Assessments and Combinations of Methods, it should be clearly noted that the pest risk assessments for New Zealand and Chile were pathway-initiated since this is knowledge critical to an accurate understanding of the systems approach as it is used here. Additionally, on page 22, the "subject matter experts" and "professional judgment of a number of experts" should be defined and identified. On page 23-24, APHIS alludes to "a preponderance of evidence" as a measure of effectiveness, and the inference is that this was the case in determining the adequacy of the systems approach as it is used in the regulation, and that APHIS exercised caution in developing the mitigation requirements. This may indeed be supportable as it relates to the New Zealand and Chilean species assessed. Nevertheless, there has been no evidence to support the application of this strategy to the importation of green softwood lumber from all other locations excepting Siberian Russia. As a result this is misleading and thus continues to bias the EIS in favor of the preferred alternative.

Moreover, the tables contain contradictory information. For example, Table 4-2 states that comprehensive inspection of logs provides some level of pest risk introduction. Whereas this value may be true, it has been clearly stated elsewhere that these inspections are not feasible. It is heat treatment that provides total pest risk reduction not the combination of measures listed as item 6. Table 4-2, derived from Orr (1992), contains contradictions when it is compared with the same table found within the New Zealand pest risk assessment. For example the pest risk assessment for Huhu beetles values methyl bromide fumigation as probably effective (PE) whereas Orr states that it is totally effective (T). There is no explanation provided for this contradiction. This, and other similar, discrepancies must be clarified. Table 4-5 indicates that fumigation of wood and bark chips would likely provide extensive or total pest risk reduction, but it does not clarify that such a fumigation procedure does not exist. This omission should be clearly stated.

On page 27 there is no basis provided for the statement that "the regulations have successfully excluded quarantine pests from log and lumber shipments." Since these shipments cannot and are not being inspected sufficiently, except perhaps in Oregon, data as to the success or effectiveness of the regulation is not available. Therefore, this statement is misleading and biases the document in favor of the proposed alternative.

Point 2-Important Additional Information, pages 28-52.

It would be helpful here (and as it relates to the discussion on pages 59-62) to discuss more generically the role of risk assessment. In other words, risk assessment by definition, extrapolates data to address uncertainty. Incorporation of and reference to APHIS' Generic Non-Indigenous Pest Risk Assessment Process as an appendix would be a helpful as a description and explanation of the role of the pest risk assessment process; and it would provide a good discussion of the issue of uncertainty and how it is addressed within the risk assessment process.

Mr. Jack Edmunson
Page 4
February 6, 1998

In addition, it would be helpful within this section to address the pest problems associated with damage, in particular, the recent interceptions of Asian longhorned beetle in unregulated damage. The infestation in New York, as well as the interceptions made once port inspectors were requested to inspect this material, have prompted the North American Plant Protection Organization to proposed draft standards for phytosanitary measures on wood damage and packing materials. Moreover, APHIS has appointed a committee to review this issue as well. It would be appropriate to include discussion of this issue here.

On page 31, the pest risk assessments for Chile and New Zealand need to be qualified as pathway-initiated; these do not identify and assess all the organisms that could become pests in the U.S., just those associated with the pathway. Here again, the recognized experts should be identified.

On pages 31-2, the uncertainties associated with control method efficacy are not discussed. In fact, discussion here is limited to heat treatment and kiln drying which are demonstrated to be effective. Specifically, this section should be expanded to clarify that the efficacy regarding the methyl bromide fumigation schedules required within the regulation. T-312 was developed for mitigating the risk associated with oak wilt fungus infecting oak logs, T-404 was developed to address bark beetles. Efficacy of these two schedules against other pests is unknown. The absence of this discussion, and any discussion regarding the unavailability of any other control treatments, again biases the EIS in favor of the proposed alternative.

Most of the discussion relating to Compliance By Exporting Countries on pages 33-42 is not pertinent to the issue raised regarding self-certification and noncompliance and as such results in bias of the EIS toward the preferred alternative. Again, the discussion of inspection upon arrival is characterized as an appropriate safeguard whereas elsewhere it is characterized as mostly unreliable. Further, there is no discussion regarding the disposition of shipments where the pest species cannot be identified. This needs to be included as part of the discussion on pages 36-38. The compliance agreement (page 36) is used to monitor mills in the U.S.; it is not relevant to compliance by foreign countries. Preclearance is indeed a credible tool for assuring compliance, but as yet APHIS has no preclearance programs in place for compliance with this regulation. Within the discussion of Risk of Noncompliance (pp. 41-42) the quarantine violations are not itemized as to type. In other words, if the majority of these are violations committed by air passengers, does this evidence and support APHIS' ability to pursue and successfully prosecute violations of this regulation? Moreover, there is no discussion of APHIS' ability to pursue certain remedies through the World Trade Organization hearing process that is much more applicable to the issue of export country noncompliance.

Alternatively, it would be appropriate to include here a discussion of the concerns expressed by the Chilean government regarding its perception that the court injunction is being used as a non-tariff trade barrier and the necessity for regulations to be necessary and transparent. In addition, it would be helpful here to discuss international trends towards privatization and accreditation as it applies to the issue of self-certification.

Mr. Jack Edmunson
Page 5
February 6, 1998

This review is meant to provide APHIS with suggestions to make the draft adequate. The department has and will continue to assist APHIS in any way possible to make this regulation an effective one.

Sincerely,

Jeff Wilford for Dortha Zadiq

Dortha Zadiq
Senior Agricultural Biologist
Pest Exclusion Branch
Division of Plant Industry

cc: Robert L. Wynn, Jr.
James Reynolds
Helene Wright
Dan Hilburn
Diane Dolstad



FIBREFORM

February 9, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Comment for consideration in the preparation of the final SEIS on the matter of importation of logs, lumber and other unmanufactured wood articles.

Dear Mr. Edmundson:

Were it not through the generosity of another commenter, Leif Joslyn who sent me a copy of your draft supplement by UPS yesterday, I would not have known about your report and been unable to provide further comment. I was one of your scoping commenters and asked to be notified when the final draft SEIS was issued. There may be a flaw in your public comment process and it may materially affect the ability of other concerned citizens to be involved in this process. You should extend the public comment period as well as notify other actively concerned members of the business and environmental groups that may wish to comment about this draft SEIS.

Obviously, the task of drafting APHIS' report is complex and clearly, the resulting draft SEIS took a great deal of study and analysis. I feel a bit hamstrung by time in providing my comment so, along with new comments I add and include my previous comments submitted originally October 7, 1997 by fax and mail. It seems that your report has not given appropriate weight and emphasis to significant points of fact raised in my earlier letter.

I have been directly involved in the mainstream commercial importation of the very items of your focus for over thirty two years and my reference point is regarded as highly professional expertise by the trade and by commenting environmental organizations. I comment from a lifetime of professional experience and not imagination or speculation.

1. You put a great deal of emphasis on the exacting standards for heat treatment made in the United States, giving emphasis to accuracy, accountability and veracity. In our

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FIBREFORM WOOD PRODUCTS, INC.

1999 Avenue of the Stars • Suite 250 • Los Angeles, California 90067 • Tel: (310) 203-5401 • Fax: (310) 203-5471

2

process of heat treatment on board ship, in transit, you have also required precise management, control and verification of the process. You are right to do so, and may regulate and substantiate these processes with a high degree of certainty that the desired results will be achieved. Your draft SEIS also states rules for preclearing activities in foreign countries for commodities such as fruit have operated satisfactorily. The wood business is not like the fruit business. Standards for fruit export have more global acceptance and impact, so exporting countries are more apt to regulate this business because of its global perspective. For example, regulation for plant health related to wood imports has little meaning in North Africa and Saudi Arabia, typical Chilean wood customers.

While APHIS is confident that the requirements under 7CFR Part 319 protect the United States from the importation of plant pests, it must not be confident that the rules and requirements will be uniformly adopted, accepted and practised. It is virtually impossible to assure that products are properly heat treated overseas and, in fact, a great deal of the wood marked kiln dried imported now, is not. I refer you to my earlier comments on this issue, included herein. It is not appropriate to satisfy a critical import standard of heat treatment with moisture reduction on the sole statement of the importer until and unless valid, licensed and verifiable third party substantiation has occurred and is reported concurrently. And, for now and the next several years, APHIS plainly does not have the means to verify treatment in foreign countries.

2. In the past it was assumed that exporting countries would initiate and install regulatory and monitoring institutions to bear the burden of watching over critical functions such as export pest control. That simply has not been the case. Recently, on November 19, 1997, in Santiago, Chile, Reuters reported the statements of Chilean President Eduardo Frei, commenting on Chile's inability to regulate itself. Specifically, he stated that Chile's present regulations were mostly conceived when the state was directly involved in providing goods and services. Since then Chile has undergone massive privatization but its regulations have remained largely unchanged, and its shortcomings have become sorely in evidence this (past) year. Frei appointed Mr. Alejandro Jadresic to head a committee that will draft a major overhaul of the government's regulating agencies. Jadresic told reporters that the commission would look at how the government regulates activities such as environmental issues

CONAF, the Chilean forestry agency reported that research on the shoot moth, a non indigenous pest detected first in 1985 (*Rhyacionia buoliana*) indicated that producing regions of radiata pine are plagued by this pest to such a great extent that "incalculable" damage will occur causing up to 40% of Chile's forest production to be lost because of this pest. CONAF also reports that the consortium of 24 forestry

company members organized to deal with this environmental health threat has largely left the problem unmanaged, preferring instead to set pulp production goals, according to CONAF's Dolly Lanfranco.

Taken at face value, the statements of the President of Chile, Eduardo Frei, the commission head Alejandro Jadresic, and the Chilean forestry agency, CONAF would suggest that an abundance of caution should be exercised by APHIS as it concerns Chilean exporter's self help with respect to environmental protection, and U.S. import regulations and their enforcement on Chilean agricultural products. The ban on importation of Chilean (and presumably other South American) pine products should be broadened and extended to include reported moisture treated heat treated manufactured products, as well as unmanufactured products until Chile's (and other concerned government's) own regulatory programs are installed, functional, and meet verifiable U.S. standards.

3. APHIS seems to be somewhat stymied by the task of creating strong regulations relating to packing materials. The review of packaging wood used in crates and pallets does not seem to consider the advance of the use or availability of engineered and composite manufactured wood products in those countries who export to the U.S. Plywood, laminated veneer lumber, oriented strand board and high temperature kiln dried hardwoods and softwoods are all available in exporting countries. These manufactured products are not good pest habitats because of the presence of resins and dryness of the wood used. Also, the processes used to fabricate these products kills pests. The incremental costs to exporters of using kiln dried or engineered wood materials in packing over raw, unprocessed lumber are negligible in the cost of the ultimate imported items. Consequently, it does not seem to be problem that justifies such hand wringing concern.

Potentially threatening packing material found in crates and pallets should simply be banned from import. Otherwise, it ultimately ends up everywhere in the country and can create damaging results. It is not APHIS's responsibility to ensure that importers have lower packing material costs. Relaxing import standards to allow for green lumber packing materials is not an acceptable alternative, given the risk, especially when stricter standards will not be an expensive burden on exporting countries and will add environmental protection to U.S. plants and citizens.

4. I spoke at the November 4, 1997 Methyl Bromide Alternatives Outreach conference in San Diego, California on the subject of my shipboard heat treatment technology. This technology is referred to in your draft SEIS on page 75. I spoke to several of your colleagues from APHIS then in attendance who agreed with the

desirability of the use of this technology for bulk wood products importation. I include an abstract of my talk in this comment for your review.

This technology is the most important new way of cleanly killing pests with the most assured protection for the environment. It also happens to be less costly than all other alternatives. The reason that I have had a difficult time in convincing importers of bulk shipments of raw or green wood log, lumber and chip products to employ this method, is that they are able to meet APHIS rules by using APHIS sanctioned deficient, non environmentally protective, and seemingly less costly established methods of treatment for pests. As long as fiber importers can slide by regulations by the use of an anti-stain dip and methyl bromide, however ineffective, they will do it.

It is up to APHIS to anticipate the problems which will undoubtedly arise when methyl bromide will not be used, and promote a diversity of viable and preferred alternatives now, not later. APHIS's own study directs that **heat treatment is the most effective way of protecting plant and animal health, and the long term health of citizens and the environment.** APHIS also acknowledges the ineffectiveness of existing protective methods and the limitation upcoming on methyl bromide use. APHIS must select its preferred alternatives based on their effectiveness and not from a criteria based on prior convenience or questionable economic benefit drawn on an unsubstantiated economic value system. That preferred alternative should include in the forefront our shipboard heat treatment technology.

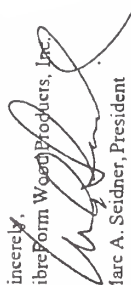
5. The draft SEIS uses terms we all think we understand but which mean substantially different things to different people, especially depending on whether one is an importer of potentially pest infested wood product or the citizen whose backyard tree becomes the new host for an exotic pest. For example in Table 4-2, Regulatory Requirements for Imported Logs from Chile or New Zealand, rules refer to 'saw log quality trees'. What is a saw log quality tree? Is this related to size, defect, purpose of cultivation, log merchandizing result or arbitrary designation? I can suggest a way to provide a contradicting definition in each instance. Also, in many foreign countries, English is not the first language and the rules are then translated into another language to be understood or applied. Do we want the strength of the protection given by our rules to be subject to the vagaries of a translator's thoughts? My point is that **APHIS should not write its regulations in a way that leads to an open and variable interpretation, because then they become ineffective and worthless.** APHIS should craft its rules very specifically and precisely to provide the maximum available animal and plant health protection benefit under any interpretation, and irrespective of foreign translation.

7

6. It concerns me that our country's environmentally protective measures may become politicized overseas and will be given lower priority at home due to economic expediency. It is apparent that there are parts of the Department of Agriculture that are charged with the responsibility to promote exports and imports as part of our free trade policy. There is nothing wrong with that, and it is good. There is also the duty of APHIS to protect our environment within the scope of its plant and animal health protection rules and regulations. APHIS does a good job, on balance in that respect.

It is difficult to avoid the effect of APHIS's rules and regulations becoming interpreted overseas as trade protectionist in the economic sense. The Department of Agriculture was criticized abroad when the latest events stopped the issuance of new permits pending this study, and the overwhelming complaint was due to issues concerning economic expediency. I have not seen that the new draft SEIS makes any mention of the separation of the responsibilities of APHIS in contrast to other departments of the Department of Agriculture, and the absolute commitment by the government that long term environmental health will not be compromised for short term economic expediency. The same Chilean government and industry which complains that our rules unfairly restrict their exports to the United States, has its own environmentally charged regulations prohibiting the import into Chile of heat treated, kiln dried pine lumber and forest products from the United States. It is necessary for APHIS and the Department of Agriculture to proactively and affirmatively state that the health of our people and the protection of our domestic environment comes above the economic concerns of our trading partners.

Please keep me informed by mailing to my corporate address any new developments in this process.

Sincerely,
FibreForm Wood Products, Inc.

Marc A. Seidner, President

enclosures: Letter of Oct. 7, 1997 - Scoping comments
Abstract summary- shipboard heat treatment

9

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3

UNIVERSITY OF CALIFORNIA, BERKELEY

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February 6, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Roverdale, MD 20737-1238

Dear Mr. Edmundson:

I wish to restate my concern about the potential for introducing forest pests into the United States from other continents and from Mexico in unprocessed (raw) logs. Under B. Point 2 – Important Additional Information d. Summary on page 32, the Supplement to the EIS (SEIS) states:

"Our knowledge of forest pests and the effectiveness of pest control methods used to control pest movement is replete with data gaps. Some organisms that are known to be forest pests have been investigated to a great extent while much less is known about the biology of others. In addition, some organisms that are not pests in their native habitats may become pests if they are introduced and become established in the United States."

I agree completely with this statement. Since our first meeting with APHIS in Portland, Oregon in 1991, Professor Fields W. Cobb, Jr. and I have written APHIS on several occasions to make the important point that *organisms that are not pests in their native habitats may become pests if they are introduced and become established in the United States*. We have always referred to the classic examples of such pests, i.e., "chestnut blight" and "Dutch elm disease." I am pleased to see that these devastating diseases are now referenced in the (SEIS) (p. 30). Another classic

example is the introduction of the "pinewood nematode" from North America to Japan and the resultant massive losses of indigenous pines in that country. A more recent example is the "pine shoot borer" from Europe, recently (1992) discovered infesting trees in Ohio and now found in Canada and several states bordering the Great Lakes.

The SEIS states further (on page 32, the last page):

"... no combination of methods or single method has been tested for effectiveness against all known or potential pests. Because of these uncertainties, developing a definitive list of potential pests and determining the absolute efficacy of pest exclusion methods is impossible. Yet, it is valid to rely upon professional judgment to identify pest organisms and to assume that once a given method effectively controls a given organism, that similar organisms would also be susceptible to that method."

In light of the above statement about relying on "professional judgment," I must conclude, (as does the SEIS on page 31, paragraph 3) that:

"... the only treatments acknowledged as effective against all pests are (1) the standard kiln drying schedules for lumber used in the United States ... and (2) raising and maintaining the internal temperature of the wood to at least 71.1° C for a minimum of 75 minutes (USDA, FS, FPM, 1992b)."

I wish to emphasize, "... effective against all pests".

Thus, in order for APHIS to accomplish its mission of preventing entry of pests into the United States, it must "... rely upon professional judgment—that once a given method effectively controls a given organism, that similar organisms would also be susceptible to that method," (page 31, last paragraph). Kiln drying and maintaining a temperature of 71.1° C for a minimum of 75 minutes in the middle of the log are the only treatments that have a chance of preventing the introduction of existing or potential pests into the United States via unprocessed logs. Thus, APHIS should only require these two heat treatments to accomplish their mission, i.e., to prevent the introduction of pests into the United States. All other methods are less effective and create a greater risk of pest entry than would application of either of the two heat treatments. Thus, it would appear that APHIS and the scientific community are in agreement on the most efficacious treatment method. If APHIS permits a lesser treatment, they alone are responsible for the introduction of new pests. If the supplier of unprocessed logs does not apply the heat treatment according

to specifications, then the supplier is responsible for the introduction of new pests into the United States.

Finally, how could APHIS omit the reference to USDA, FS, FPM, 1992b, Proposed Test Shipment Protocol for Importing Siberian Larch Logs, Adm. Rec. 9435 9457, April 15, 1992 in the 1994 EIS? While heat treatment was discussed in the 1994 EIS (p. 31-33), a technical panel was convened by the USDA, FS (above 1992b reference) to explicitly address unprocessed log imports. This panel's view was the most definitive view of risks from the use of various treatment to control pests in unprocessed logs. For example, by using heat, one does not have to use methyl bromide, and thus try to justify its use in the face of its damaging ecological effects. Meanwhile, three years have elapsed since the last EIS and numerous permits to import unprocessed logs remain in effect. Writing the EIS in the courts continues to place our forests at risk.

Heat remains the only effective treatment. APHIS should require its use for a unprocessed log imports. The protocols outlines in USDA, FS, EPM, 1992b should be required.

Thank you for the opportunity to comment on the SEIS.

Sincerely yours,

David L. Wood

David L. Wood
Professor of Entomology

cc: Professor F.W. Cobb, Jr

DLW:sdm

5/11/98

27



THE WILDERNESS SOCIETY

PACIFIC NORTHWEST REGION

February 6, 1998

Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

The following constitutes The Wilderness Society's comments on the Draft Supplemental Environmental Impact Statement on Importation of Logs, Lumber, and Other Unmanufactured Wood Articles (DSEIS).

The Wilderness Society is deeply concerned about the threat to native ecosystem health and integrity posed by invasive alien organisms, and we support aggressive action by the federal government to protect our ecosystems through regulation and phytosanitary measures. We believe that international trade in raw logs, lumber, chips, and other unmanufactured wood articles, especially trade with other temperate zone nations, is an extraordinarily dangerous proposition demanding the highest sanitary standards and acceptance of only the minimum risk. Unfortunately, we do not believe that the actions proposed in the DSEIS come anywhere close to the measures needed to achieve ecological security. In large part, we agree with the issues raised by the Western Ancient Forest Campaign regarding the inadequacy of the DSEIS, and we commend you to their comments on the DSEIS.

The potential for major disruption of ecosystems illustrated by such invasive exotic species as chestnut blight, white pine blister rust, and gypsy moth demands that the highest standards be met before an exotic organism be allowed into the country. This includes requiring knowledge of species taxonomy, distribution, and ecology. We are very concerned that APHIS does not appear to share our insistence on sufficient information to support decision making. For example, despite protestations that a "lack of information on a given insect or microorganism" does not mean that these pests will be designated as low risk" (DSEIS p.29), the hazard risk assessment form in Appendix C directs inspectors to assign a low risk to, and take no action against, species for which nothing is known about their ecology, even if the species is known to be non-indigenous and capable of establishment in the U.S. Inconsistencies like these cast doubt on the sincerity and adequacy of the entire DSEIS.

In addition, we have grave concerns over the reliance on inspectors, within the "integrated program," to prevent invasion of exotic species. Dedicated and hard-working though they may be, APHIS inspectors are only able to catch violations of sanitary measures gross enough to draw suspicion, and that is assuming the inspectors have the time to conduct a thorough examination. Requiring massive piles of chips to be "free of rot," but relying on inspectors to make that determination is a recipe for disaster. There is a role for inspectors in the battle against invasive exotic species, but we are concerned that the proposed plan over relies on them as a sanitary measure. The DSEIS does very little to assure us that inspection will function as effectively as it is assumed to in the plan. Presentations at the conference on "Importing Wood Products: Pest Risks to Domestic Industries," held in Portland, Oregon, on March 4-6, 1996, detailed the inadequacies of current inspection protocols. We refer you to the proceedings of that conference, published by Oregon State University (which we are disappointed to see missing from the references in the DSEIS), for discussion of this and other relevant issues.

We are appalled by the inadequacy of the economic analysis summarized in the DSEIS. While the report mentions some of the dramatic economic losses incurred as a result of past introductions, it fails to weigh the potential losses from future introductions against the costs of prevention. Instead, the analysis focuses on costs of implementation of what we believe to be inadequate measures. An adequate analysis would have weighed the potential losses under various alternatives against the costs of implementation of those alternatives. We believe that such an analysis would have shown that the marginal savings of each increment of protection would justify the highest possible standards and the acceptance of only the very lowest probability of introduction.

Finally, the findings included in the DSEIS, as well as the now extensive literature on invasive species not referenced in the DSEIS, demand a reversal of the burden of proof applied to log imports. APHIS has proposed a system that allows the greatest possible trade in raw logs subject to minimal phytosanitary standards. The burden of proof is on the United States to show that a species is a pest, and the burden is on the inspector to find those pests in each shipment. We believe, instead, that the burden must be on those who seek to import/export to prove that each shipment is pest free. These standards should be high enough to discourage unscrupulous traders from trying to "heat the system," limiting trade in raw wood only to those most unique and valuable materials for which there is a compelling reason for trade.

Thank you for considering these comments. We look forward to seeing how they are addressed in the Final SEIS.

Sincerely,

Gregory H. Aplet

Gregory H. Aplet, Ph.D.
Forest Ecologist

Robert M. Freemark

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Assistant Director



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28

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10

February 6, 1998

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Riverdale MD 20737-1238

8

Subject Draft Supplement to EIS re Importation of Logs, Lumber and Other
Unmanufactured Wood Articles

Dear Mr. Edmundson

Weyerhaeuser Company owns or manages 5.4 million acres of forest land in the Pacific Northwest and southeastern U. S., approximately 193,000 acres of forest land in New Zealand, manufactures forest products at many locations in the U. S., and distributes forest products manufactured by itself and others on a worldwide basis. We are very interested in protecting U. S. forests from exotic pests and in all aspects of international trade in forest products.

We are members of the American Forest and Paper Association and support the comments being submitted by AF&PA on the Draft Supplement to the EIS. Additionally, we offer some further comments from our perspective as a major forest landowner and a worldwide distributor of forest products.

We import radiata pine logs from New Zealand for manufacturing at our veneer mill at Aberdeen, Washington, under a current APHIS permit. Dr. Will Litke, our chief scientist for Integrated Pest Management, who is part of our forestry research organization, has completed a case study of phytosanitary measures used for those imports under current rules and practices. A copy of that study, entitled "Pacific Veneer Ltd.: A Review of Integrated Pest Control Measures to Prevent The Introduction of Foreign Pests During Processing of Imported Radiata Pine Into Dried-Veneer Product," is enclosed. The principle conclusion of this review is that pest mitigation treatments and manufacturing conditions in combination provide a much higher level of pest exclusion potential than either situation alone. Experience at Pacific Veneer's facility since 1993, demonstrates that importation of radiata pine logs from New Zealand is being accomplished without endangering U. S. forests.

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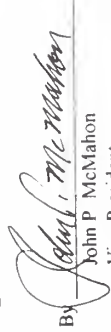
Unnecessary or inadequately documented barriers to wood imports could jeopardize the credibility of the U. S. in current and future negotiations related to international trade.

The injunction has also caused substantial problems for the private sector and, if not lifted soon, those problems will rapidly increase. Government actions--treaties, laws, regulations, etc.--establish the framework and climate in which private parties conduct business, but trade in goods, services, technology, and capital is most often initiated and sustained by private actions. It takes considerable time and expense to identify international trade opportunities, and to establish the business relationships necessary for transactions to occur. The private parties involved must target their efforts on the projects and transactions most likely to be successfully completed. While the current injunction may be viewed as temporary, we believe it is discouraging foreign suppliers from considering the U. S. as a potential market, and discouraging U. S. manufacturers and distributors from considering foreign suppliers as potential sources for raw materials and products. Any extension of the injunction could further discourage people, in this country and abroad, from investing time and resources in developing opportunities for future forest product trade.

For over 50 years every U. S. President has negotiated and supported agreements to minimize trade barriers, generally with bipartisan support from Congress. Through its development and administration of phytosanitary regulations, APHIS has a key role in implementing the trade policies that have been established by the appropriate U. S. officials. While NEPA may require APHIS to examine the environmental risks, consider "worst case scenarios", and identify ways to mitigate the risks, the EIS process is procedural. Its purpose is to assure that agency decision makers have considered relevant information about the potential environmental effects of their decisions, but it does not change APHIS's underlying responsibilities. Having complied with the applicable NEPA and EIS procedures, APHIS must then make every effort to implement our nation's foreign trade policies by minimizing the barriers to international trade that may be imposed through its phytosanitary requirements. We are confident that the final Supplemental EIS will provide sufficient basis to support APHIS's decisions regarding phytosanitary requirements for importation of logs, lumber, and other unmanufactured wood articles.

Thank you for the opportunity to comment

WEYERHAEUSER COMPANY

By  John P. McMahon
Vice President
Timberlands External
and Regulatory Affairs

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We believe the Supplemental Environmental Impact Statement (SEIS) should emphasize the interrelationships and cumulative effects of all of phytosanitary measures taken together, and the "backstop" procedures available to APHIS if there ever is evidence of significant exotic pest risks to U. S. forests or agriculture from imports of unmanufactured wood products. The initial pest risk assessments did not take into account the "treatment" conditions inherent in individual manufacturing processes, especially veneer and pulp manufacturing. Various measures, if viewed in isolation, might not provide complete protection from exotic pest risks. However, each measure--when viewed in its context as part of a sequence of protective measures--adds a further measure of security, complementing other measures that occur earlier, concurrently and later in the chain of events from harvest of timber in a foreign country to eventual use of the finished products in the U. S. Further, if all of the measures together did not appear adequate in some future circumstances that cannot now be foreseen, APHIS has authority to respond by requiring additional inspections, suspending permits, issuing emergency rules, etc.

Therefore, the issue is not whether any one phytosanitary measure is adequate to guarantee protection of U. S. forest lands and agricultural crops, but whether all the measures collectively are sufficient to reduce the risks to reasonable levels, given the backstop measures that are available if needed to respond to unexpected circumstances. The draft SEIS does a good job of documenting why the answer to this question should be affirmative. The final SEIS should include summaries of and references to additional information that becomes available through the public comment process, but we believe the answer still should be the same: taken as a whole, and in the context of APHIS's authority to take additional steps if needed, the current rules adequately protect the interests of U. S. forest and farm owners, the U. S. government, and other affected parties. The current rules should be reaffirmed and APHIS should ask the court to lift its injunction.

Weyerhaeuser holds APHIS permits for the unmanufactured wood products it currently imports and has no immediate need for additional APHIS permits. However, we believe the injunction has already damaged international trade relationships and, if not lifted soon, will cause substantially more damage at both the governmental and private-sector levels.

Minimizing barriers to international trade has been a keystone of U. S. foreign policy for more than five decades. The U. S. has negotiated numerous international treaties and agreements to reduce tariff and non-tariff trade barriers, and to put the "burden of proof" on those nations wishing to impose non-tariff barriers. The General Agreement on Trade and Tariffs allows countries to impose phytosanitary permit requirements to protect their domestic crops (including timber) from exotic pests, but only if based on scientifically credible risk assessments and well-documented findings that the measures imposed are necessary to reduce the pest risks to reasonable levels. The letter and spirit of GATT and other international agreements require the U. S. to accommodate wood imports to the maximum extent possible without unreasonable pest risks to domestic forests or crops.

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From: Craig Regelbrugge To: Jack Edmundson

Date: 2/10/98 Time: 8:01:38 AM



1250 I Street, NW, Suite 500, Washington, DC 20005-3922
T-E: 202-789-2900, Fax: 202-789-1893

February 10, 1998

Mr. Jack Edmundson
Environmental Protection Officer
Environmental Analysis Division
PPD, APHIS, USDA
4700 River Rd., Unit 149
Riverdale, MD 20737

RE: Docket No.

Dear Mr. Edmundson,

The American Nursery & Landscape Association (ANLA) is the national trade organization representing the U.S. nursery and greenhouse growers, retail garden centers, and landscape professionals. Domestic and international movement of our industry's products is governed by an array of certification and quarantine requirements designed to address the threat of inadvertently moving plant pests. More specifically, the nursery industry is significantly impacted by quarantines that address an array of exotic pests. Many of these pests are believed to have been introduced into North America on logs, lumber, or other wood products. Therefore our industry has a keen interest in the APHIS regulations - and associated Environmental Impact Statement (EIS) - addressing the movement of wood articles.

Given that ANLA has provided previous input during public comment periods associated with these rules, we had assumed that our organization would receive a review copy of the draft supplemental EIS. However, to date, we cannot verify that a copy was received. As a result, about two weeks ago we called Mr. Richard Orr to discuss the document. He indicated that he would send a copy by mail. However, while we fully expect that the copy was sent, as of February 9, that copy had not been received in our office.

In view of our strong interest in providing comments, ANLA respectfully requests a reasonable extension of the comment deadline, in keeping with the National Environmental Policy Act regulations found at 40 CFR 1502.19. We will forward any comments as soon as practical. Please contact me if you have questions or comments.

Sincerely,

Craig J. Regelbrugge
Director of Regulatory Affairs
and Grower Services

Formerly the American Association of Nurserymen
ANLA is a non-profit organization that represents the interests of plant material owners,
growers, and users. It is a 501(c)(6) organization. For more information, contact the ANLA office at 1250 I Street, NW, Suite 500, Washington, DC 20005-3922.



Oregon
John A. Kitzhaber, M.D., Governor

30

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2/10/98

Department of Agriculture
Mailing address
635 Capitol Street NE
Salem, OR 97310-0110

Location address:
3420 Cherry Ave NE



February 9, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

Thank you for the opportunity to comment on the Draft Supplement to the Environmental Impact Statement for the Importation of Logs, Lumber, and Other Unmanufactured Wood Articles (DSEIS). The document contains some new information and more complete explanations than the original Environmental Impact Statement (EIS), but it still contains major flaws. The most serious problem with these documents is that the preferred alternative is not supported by the information in the EIS / DSEIS.

The experience of the Oregon Department of Agriculture with shipments of imported logs, lumber, and other unmanufactured wood products reinforces our belief that the current regulations (Preferred Alternative, #2) are inadequate to meet APHIS's charge (DSEIS, pgs iii & 8): "preventing the introduction and dissemination of exotic animal and plant pests and pathogens in the United States for the purpose of protecting its agricultural, aquacultural, and forest resources".

The basic problem stems from the authors' (APHIS's?) position (pg 19) that: "procedures and treatments.....must be effective, practical, and economically feasible". Developing phytosanitary regulations should not be a balancing act between science and business. In fact, what is important is that the procedures and treatments are effective -- PERIOD. Practicality and economic feasibility are bonuses when they are possible, but they should not be a requirement and should not affect decisions relating to risk mitigation. If there are no practical and/or economically feasible treatments that are effective, so be it. The health of forests and trees in this country is too important to gamble with.

Figure 2 (pg 60) illustrates the point. The title of the figure is: "Relative Ranking of Alternatives with Regard to Their Ability to Exclude Pests and Their Environmental Consequences". This table is not a substitute for real data that might support the current regulations (Alternative #2), but it does show that the preferred alternative is intermediate in effectiveness among the alternatives presented. Is this the appropriate level of protection for our native forests, agriculture and urban

environments? The evidence we have, including the information in the EIS and DSEIS, indicates it is not. Consider the following:

- 1.) **Lessons from Pest Risk Assessments.** Pest Risk Assessments (PRA's) on imported logs, lumber, etc. prepared for APHIS by the US Forest Service have identified numerous pests and pathogens with high or moderate risk potential from Siberia, New Zealand, and Chile (DSEIS pgs 2 & 3). This pattern is very likely to continue if additional PRA's are done; trees have insects and pathogens associated with them no matter where they are grown. There will always be a risk of bringing in hitchhikers on untreated or partially treated wood products.
- 2.) **Data Gaps.** The PRA's for imported logs and lumber have identified gaps in available biological information (DSEIS pg 3). In particular it is "most difficult.....to assess for pest potential those [organisms] that are not known to be pests in their native habitats, but which may become pests if introduced and established in the United States" (DSEIS pg 30). This uncertainty will always plague us. Any living organism introduced from another environment could behave in unexpected ways and become a pest. The old adage of quarantine "when in doubt, keep it out" should still be our guide.
- 3.) **Lessons from History.** History tells us over and over again that introductions of exotic pests and diseases can be extremely costly in both economic and environmental terms. The list in the DSEIS (pg 5) (chestnut blight, Dutch elm disease, white pine rust, European gypsy moth, Asian gypsy moth) is just a beginning. "More than 20 exotic fungal pathogens and 360 exotic insects now attack woody trees and shrubs in North America" (DSEIS pg 4 from Haack and Baler, 1993). The 1993 Office of Technology Assessment report, *Harmful Non-Indigenous Species in the United States*, contains many other examples and documents their impacts. Another adage applies here: those who do not learn from history are doomed to repeat it.
- 4.) **Projections.** Projections of potential future impacts of introduced pests and diseases support the seriousness of the risk we are exposing ourselves to when we import raw wood products. The Siberian timber PRY estimated that introduction of larch canker could cause direct timber losses of \$129 million annually (DSEIS pg 11). When weighing the risks of importing raw wood products we need to compare figures like this against the benefits. Who is profiting from the practice of importing wood? Mostly a very few importers and mill owners. Who is taking the risk of pest/pathogen introduction? Society. Are we doing the right thing?
- 5.) **Delays in Detection of New Introductions.** There is a problem with the notion that "since the promulgation of the wood import regulation, monitoring indicates that the regulations have successfully excluded quarantine pests from log and lumber imports" (DSEIS pg 27). The truth is

that a lot of living organisms have arrived on imported wood products since the regulations were promulgated and we don't know whether or not they have established. It is quite normal for a new introduction to be established for many years or even decades before the pest or disease builds up to detectable levels. The recent detections of Pine Shoot Beetle and Asian Longhorn Beetle illustrate this point. These pests were well established before anyone noticed them. Have we already introduced the next major forest pest on imported wood? It is too early to know.

- 6.) **Inadequacy of Inspections.** APHIS wisely admits that inspection of large quantities of logs, lumber, etc. is insufficient to confirm or deny the presence of plant pests (DSEIS pgs 2 & 21). Yet the authors maintain that "monitoring indicates that the regulations have successfully excluded quarantine pests" (DSEIS pg 27). There is a contradiction here.

The experience of the Oregon Department of Agriculture is that a variety of living organisms, mostly fungi, arrive with each shipment of imported wood. These shipments are routinely cleared by APHIS inspectors after a visual inspection and no "actionable pests" are found. A closer look reveals a different picture. As an example, on November 25, 1997, ODA inspectors took samples from green Mexican railroad ties that had arrived in Oregon on October 23, 1997. Fungi were collected and cultured and five different species have been identified to date including: *Heterobasidion annosum* (Annosus root-rot), and *Splachopsis sapinea* (?) (Diplodia Shoot Blight). These are pathogens and fruiting bodies were present so that we can assume spores were being released (see attached letter and pictures). The October 1, 1996 draft copy of the *Pest Risk Assessment of the Importation into the United States of Unprocessed Pinus and Abies Logs from Mexico* rates these two diseases as of moderate pest risk potential. Our staff has also recovered Ophiostomid (*Sporothrix* spp.) fungi on timber imported from Mexico, Chile and New Zealand. Several PRA's correctly point out that fungi in this group are potentially devastating and are of major concern. Are current regulations really keeping out potential pests and diseases or do we have our head buried ostrich-like in the sand?

- 7.) **Professional Judgment.** The DSEIS makes the case that "reliance upon professional judgment is generally recognized as the preferred method to overcome data gaps" (pg 32). It is curious then that APHIS does not follow the professional judgment of the scientists that commented on the DEIS (see letters EIS, Appendix B). Without exception, all the letters from scientists were not supportive of the current regulations; they were unanimous in their professional judgment that the regulations should be strengthened. Most of the scientists recommended Alternatives #4 or #6. Only a small minority of all the letters received supported the current regulations, predictably importers generally fell into this group. Whose professional judgment is APHIS relying on?

8.) Efficacy of a Combination of Individually Ineffective Treatments. Tables 4.3 through 4.5 summarize the expected mitigation results of a combination of treatments. The DSEIS claims that these *expected* results "demonstrate" extensive to total reduction of pests entering the U.S. However, there is still no actual data provided to support this claim. Since 1990, it has been our recommendation that third party research be conducted to address this issue, but to date, we are still dealing with conjecture, extrapolation and probabilities. We find no evidence of additional data to show or demonstrate the efficacy of Alternative #2. We also do not concur that a 95% reduction is an "extensive treatment", especially when we are dealing with many thousands of tons of imported wood products per shipment and when extensions in processing time are frequently granted to mills and processors. The 5% residual (100% - 95% = 5%) still leaves a huge window of opportunity for pest escape and establishment.

In further support of the view that combinations of treatments are effective and that professional judgments and extrapolations of pest control methods are "effective against known potential pests" the DSEIS touts the system for the importation of nursery stock (etc.) under 7 CFR 319.37-0 (pg 33). As a major nursery state, Oregon frequently imports large quantities of nursery stock. In random screenings by our staff we routinely discover imported shipments that are infested with plant pathogens which require either destruction or further treatment of the stock. While undoubtedly the federal nursery stock program detects and rejects some amount of pathogen or pest infested nursery material, it still allows many importations of plant pests. We certainly recommend that the mitigation levels adopted for imported wood products be significantly higher than the current mitigation levels for imported nursery stock. We also find it a bit disingenuous that the DSEIS would interject a program for comparison that is most likely unfamiliar to the target audience of the report and expect them to make an informed opinion on its relation to the subject at hand. Essentially, the DSEIS is offering a red herring in its summary paragraph and one that is a bit smelly besides.

Under Oregon statute and rule (ORS 570.700 -- 570.710 and OAR 603-52-1100 -- 603-52-1130), materials that have undergone the combination of treatments in Alternative #2 (including plantation-grown, high quality logs, rapid harvest, debarking, methyl bromide fumigation, NP-1 anti-sap stain, pyrethrins and port inspections) are legally classified as untreated. Our legislature understood that this combination of treatments was insufficient to protect our timber industry, consumers and natural resource base and took action in 1995 to address the insufficiencies of APHIS's mitigation of pests on imported wood products. While Oregon works to strengthen our cooperation with APHIS on a broad number of issues, we have occasionally found it necessary to act at the state level when the situation warrants, as the current case has required.

9.) Use of Methyl Bromide as the Major Treatment in the Preferred Alternative (#2). Tables 4.3 through 4.5 report the expected mitigation results of the use of the fumigant methyl bromide. It is the only treatment at the point of origin that gives either extensive (E) or total (T) control over the wide range of pests listed. Removing methyl bromide from the treatment list will reduce the mitigation to either some (S) reduction or extensive reduction, which is totally unacceptable. The EPA's Clean Air Act and USDA agency rules [APHIS cannot require a foreign treatment for which an EPA FIFRA labeled use does not exist] will likely disallow the use of methyl bromide as a point of origin wood product treatment as of January 1, 2001. This leaves less than three years of FIFRA label life for the fumigant's use as a point of origin treatment.

As of January 1, 2001, Alternative #2 will be practically useless in terms of pest mitigation. On page 74, the DSEIS states "there is always an alternative to the use of methyl bromide in the wood import regulations". Unfortunately, the DSEIS does not disclose an alternative treatment. Aside from being only marginally effective in pest exclusion, we believe that the DSEIS should make it clear that Alternative #2 is a short-term option and not one that importers and processors should rely on for more than a few years.

We appreciate the effort that has gone into developing this DSEIS by USDA, APHIS staff. However, we can't help but compare it in depth, size, completeness and technical accuracy to the USDA 1995 *Gypsy Moth Management in the United States Final Environmental Impact Statement*. Clearly the DSEIS falls far short of what the USDA can produce when it allocates the appropriate resources to such an important document. We are especially concerned with the reduced (minimal) scoping process, lack of active inclusion of a broad range of acknowledged experts and experienced practitioners in developing this DSEIS (and the original EIS).

Assessments of risk at times appear to contradict our best information, science, logic and experience. Examples of this in the DSEIS include some of the ratings of pest risk reduction and efficacy of methyl bromide and debarking in Chapter 4 tables; windows of opportunity for escape of plant pests and pathogens prior to final heat treatment in the United States appear to be ignored, especially in Table 4-5. Examples in the wood rules include: 1.) allowing temperate hardwood, wood chips, bark chips, wood mulch, humus, compost and litter to enter and remain in the United States without even requiring eventual complete treatment and 2.) allowing the import of western Russian wood with lesser protection than for wood from the Russian Far East although many of the same plant pests and pathogens occur on both sides of the line in Asia at 60°E. Longitude and N. of the Tropic of Cancer. Finally, the assumption that tropical hardwoods do not pose a plant pest risk to the United States has never been tested with even a thorough pest risk assessment.

We believe that protecting our natural resources from exotic plant pests and pathogens is a fundamental issue; mistakes in this area can reduce the quality of life for our citizens, devastate local, regional and national economies and negatively

impact our ecosystems through ecological disruptions and increased pesticide use. All that protects our country's forest and horticultural resources from exotic plant pests and pathogens is the original EIS, this DSEIS and the wood rules. We do not feel secure with this level of protection.

In conclusion, the main problem with the EIS and the DSEIS is that they do not support APHIS's choice of Alternative #2 (Current Regulations) as the preferred alternative. The evidence outlined above would support a higher level of protection such as Alternative #4, currently carrying the negatively expressed title of: "Prohibit Importation of Untreated Wood". We recommend renaming this alternative to: "Facilitate Trade of Pest-Free Wood Products". It sounds better and it expresses both APHIS's primary mission of protecting the United States from the introduction of exotic pests and its secondary mission of facilitating trade.

According to the best information we have and the DSEIS (pg 19 & 31) "the only treatments acknowledged as effective against all pests are (1) the standard kiln drying..... and (2) raising and maintaining the internal temperature of the wood to at least 71.1°C for a minimum of 75 minutes". APHIS has correctly adopted these treatments as Universal Importation Requirements. There should be an additional provision allowing use of other treatments that have been demonstrated to be effective against all types of potential pests associated with a particular product. The regulations should end here -- no exceptions for raw lumber, plantation-grown logs, wood chips or any other raw wood product and no approval of partially effective treatments even when several are strung together.

This approach (Alternative #4) is not risk-free, that would be an unreasonable expectation. Incorrectly applied treatments, human errors, and dishonesty would still occur; inspectors may not catch some of these potential problems. When working properly, however, this system would provide that **shipments of imported wood products would come in free of potential pests and that is the appropriate level of protection for the forests and trees of the United States.**

Thank you again for the opportunity to comment on this document.

Sincerely,

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Administrator, Plant Division

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9 February 1998

2/10/98

Mr Jack P Edmundson
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Dear Mr Edmundson

DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT, DECEMBER 1997

This submission is made by the New Zealand Government in response to your Agency's Federal Register Notice on December 12, 1997 (ER-FRL-5487-2) inviting public comments on the document "[E]S No 970468 Draft Supplement, APHIS, Importation of Logs, Lumber and Other Unmanufactured Wood Articles: Draft Supplement to the Environmental Impact Statement, December 1997 (Draft SEIS)".

This submission is complementary to my Government's earlier submission dated 25 September 1997 (a copy of which is attached) in which we expressed our concern about the Court's injunction on the issuing of new permits by APHIS for the importation of certain unfinished non tropical wood articles under the 1995 regulations, and the impact the injunction would have on our bilateral forest trade relations. In light of the volatility in market conditions as a result of the Asian economic crisis, the restriction on the ability to develop new markets accentuates the difficulties the industry is facing.

2

In addition to the impact of the injunction on new entrants, the economic impact on New Zealand exporters would be particularly significant if the injunction were not lifted in time for APHIS to renew the first batch of existing permits (with three years' duration and without a compliance agreement) that were issued in September 1995 and are due to expire in September this year.

While the New Zealand forest industry will be submitting separately its own comments on the draft SEIS my Government wishes to make the following comments.

The draft SEIS has been prepared to respond to the order by the U.S. District Court for the Northern District of California to address uncertainty and to improve clarity on the three issues cited by the Court relating to the Environmental Impact Statement published in July 1994 upon which the wood import regulations were based. We consider that the draft SEIS adequately and appropriately addresses the three issues identified by the court and we are in broad accord with the conclusions drawn, in particular that the present US regulatory framework to manage the importation of non tropical wood products is justified. However, we would like to comment on a few specific issues in more detail.

1 Chapter IVA. Efficacy of Combination of Methods (pp 19-32)

In general we agree with the draft SEIS that the collective control measures are efficacious for the reasons set out, including their being based on best available scientific data and introduced only after conclusion of a pest risk analysis. We consider that the existing regulations which include the imposition of appropriate quarantine procedures and other mitigative and management measures are appropriate to minimise the assessed potential risks.

2 Compliance by Exporting Country (pp 33-42)

As an exporting country we wish to provide an overview of our compliance policy and systems.

New Zealand's economy is heavily reliant on the export of primary products. New Zealand is, therefore, determined to ensure that all our primary industries, including our forest industry which is plantation based, operate on a sustainable basis and in a managed sanitary/phytosanitary environment. To this end the New Zealand regulatory regime is designed to prevent the entry into the country of undesirable quarantine pests and diseases and is focused on managing risk to facilitate trade. We strive to maintain the efficacy of our systems and believe that NZ is recognised as a responsible international citizen in phytosanitary matters. New Zealand's forest disease surveillance and pest control legislation (Forests Act 1949 and Regulations thereunder including the Forest Disease

3

Control Regulations 1967, the Resource Management Act 1991 and the Biosecurity Act 1996) are often cited as leading models.

In liaison with our industry, our programmes and associated legislation are constantly reviewed and, where necessary, new or additional technical and pest management systems and programmes are introduced and implemented based on the best available scientific information.

New Zealand Compliance Procedures

A number of procedures are in place to ensure that New Zealand log and lumber exports comply with the US importation requirements. The Ministry of Forestry inspects operations and audits the mitigation measures applied by exporters to shipments of logs exported to the United States. These audits include examination of records maintained by exporters relating to the age of logs, debarking operations, the concentration of anti-sap stain chemicals applied, and the fumigation of each consignment to APHIS schedule T404. A Ministry of Forestry Phytosanitary Certificate as well as a Statement of Compliance with APHIS mitigation requirements is issued with each consignment. The Ministry also assists in training industry personnel in phytosanitary inspection procedures for sawn lumber exported to the USA.

Since 1956 New Zealand has maintained continuous surveillance of all plantation forests and of the environs of ports of entry through systematic surveys by professional Forest Health Officers, backed by a team of forest pathologists and entomologists. This has given New Zealand a detailed knowledge of the pest status of plantation forests and allowed rapid action against new pest introductions.

New Zealand has worked closely with United States' technical and policy staff in the APHIS' Pest Risk Assessment of New Zealand and to ensure that both officials and industry are fully aware of and follow the USDA quarantine requirements.

3 Existing US regulatory regime as it applies to New Zealand

We consider that the current US Regulatory framework adequately and appropriately addresses the low risks presented by the importation of raw logs and lumber imported from New Zealand and the even lower risks (considered by our technical experts to approach or equal zero) presented by the importation of kiln dried lumber

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4 Human Health Effects of Eradication and Control Efforts (pp 42-53)

We wish to point out that *Sirex noctilio* is the only pest of major concern from New Zealand and this can be very successfully controlled by biological control agents (parasitoids) (referred to in paragraph 2 of page 46) which have no effect at all on human health.

In conclusion, my Government considers that the draft SEIS comprehensively addresses the area of uncertainty and the specific issues cited by the Court. It is our considered view that the draft SEIS vindicates the current US regulatory regime for the importation of non tropical wood products from New Zealand.

My Government remains seriously concerned at the implications of the District Court ruling, and we hope that the draft SEIS will lead to the immediate lifting of the temporary injunction.

Yours sincerely



John Wood
Ambassador



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32

February 9, 1998

RECEIVED
2/10/98

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RE: Docket No. 97-072-1: Comments on Supplemental Environmental Impact Statement for the Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, Docket No. 97-072-1

Dear Mr. Edmundson:

The following comments on the Draft Supplemental Environmental Impact Statement for the Importation of Logs, Lumber, and Other Unmanufactured Wood Articles (DSEIS) are submitted by the Western Environmental Law Center on behalf of the Pacific Environment and Resources Center, Oregon Natural Resources Council Action, and the North Coast Environmental Center.

The DSEIS was prepared in response to a ruling of the Federal District Court for the Northern District of California in ONRC v. APHIS, Civ. No. 95-4066-CW. In ONRC the court held that the original, final EIS did not satisfy the requirements of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., or the regulations of the Council on Environmental Quality (CEQ), 40 C.F.R. § 1500 et seq. Unfortunately, the DSEIS fails to address the basic flaws in the original EIS. In fact, the DSEIS appears to be little more than a reformulation of the language and information in the original EIS.

Because the flaws in the DSEIS are so fundamental, any final SEIS that cured the flaws would vary so greatly from the DSEIS that it would have to be recirculated for public comment. Accordingly, PERC, ONRC, and NRC respectfully request that the DSEIS be withdrawn and a new DSEIS that more candidly addresses the flaws in the original EIS be circulated.

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 2

1. THE DSEIS FAILS TO ADDRESS IMPORTANT NEW INFORMATION AND CHANGES TO THE LOG IMPORT REGULATIONS THAT APHIS IS CURRENTLY CONSIDERING

Although agencies have an ongoing obligation to address new information in their NEPA documents, the DSEIS does not address the four years of experience that APHIS has now had under the new regulations, and does not address new studies and risk assessments that have been developed since the regulations were originally adopted. See 40 C.F.R. § 1502.9 (supplemental EIS's should address "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." APHIS is aware, for example, that pests have been coming into the country on shipments of logs and other unprocessed wood products despite the mitigation measures called for in the regulations, but does not discuss the importance or consequences of this fact in the DSEIS. Railroad ties from Mexico, to give just one example, have been imported with both fungal and insect pests abundantly displayed. APHIS maintains an Agricultural Quarantine Inspection Program Results Monitoring Program (see DSEIS at 68), but does not disclose or consider the data in this program. Such data would be particularly useful in evaluating the assertion in the DSEIS that APHIS's regulations will be completely effective in preventing pests from entering the country.

The DSEIS also fails to disclose or discuss the fact that APHIS is currently preparing a new risk assessment for wood products from Mexico, and is considering amendments to the log import regulations based on this assessment. APHIS's desire to go forward with its log imports program cannot override NEPA's requirement that agencies take a hard look at the possible environmental consequences of their programs before they act. Such a hard look must necessarily include the most recent information and full consideration of all actions the agency is considering taking at the time that the EIS is prepared. The DSEIS fails to do this.

The only new information addressed in the DSEIS is a General Accounting Office (GAO) titled "Agricultural Inspection -- Improvements Needed to Minimize Threat of Foreign Pests and Diseases, May, 1997, GAO/RCEd-97-102. The GAO report is highly critical of APHIS's pest control efforts. The DSEIS's discussion of this report does not deny its accuracy, but does attempt to explain away its criticisms. Again, this is not the "hard look" that NEPA requires.

The GAO Report criticizes APHIS's ability to effectively minimize the risks of imported pests and diseases. The Report concludes that APHIS's inspection program has not kept pace with the increasing demands of international trade. GAO Report at 7. In particular, GAO questions the thoroughness of APHIS's inspection practices and criticizes the staffing models APHIS uses to allocate its inspection resources.

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 3

The DSEIS should have responded to the GAO Report with a good faith, reasoned analysis. Silva v. Lynn, 482 F.2d 1282, 1285 (1st Cir. 1973) ("Where comments from responsible experts or sister agencies disclose new or conflicting data or opinions that cause concern that the agency may not have fully evaluated the project and its alternatives, these comments may not simply be ignored.")

The DSEIS responds to the GAO Report in part by asserting that "APHIS funding and staffing levels have increased substantially by approximately 78 percent and 44 percent, respectively, from fiscal year 1990 to fiscal year 1996, strengthening the Nation's 'first line of defense' against exotic pests and diseases." DSEIS at 67. The DSEIS does not reveal, however, that the GAO Report accounted for these increases, and based its criticisms on the program's lack of effectiveness even after the increases. This is misleading. Furthermore, a careful reading of the DSEIS reveals that the increases in the AQI program have come at the expense of other important pest control programs -- yet the DSEIS leaves the distinct impression that the 78% and 44% figures represent net increases in APHIS resources. The true status of APHIS's inspection program is that the program "has been compromised due to reduced funding and staffing allocations for domestic plant protection programs." DSEIS at 67 (the DSEIS then attempts to explain this away by saying that APHIS will "take additional steps" to solve the problem)(DSEIS at 68-69).

The DSEIS also fails to address the GAO Report's conclusion that APHIS inspectors are shortcutting their inspection procedures. APHIS inspectors are unable to keep up with increasing demands and are unable to inspect an adequate number of vehicles and cargo. In addition, the Report found that inspectors often fail to select cargo samples in a manner that ensures that the samples are representative of the shipment being inspected. Id. at 9. These assertions are particularly disturbing, considering the weight APHIS's proposed regulations place on its inspection procedures. The DSEIS should have addressed the Report's criticisms more forthrightly, and proposed an appropriate solution.

II. THE DSEIS FAILS TO EXPLAIN HOW A COMBINATION OF INEFFECTIVE MEASURES WILL SUCCESSFULLY MITIGATE THE RISK OF PEST INFESTATION

In ONRC v. APHIS, the Court found that the original EIS had impermissibly glossed over:

the considerable uncertainty about the effectiveness of different mitigation measures. The EIS and the regulations are based on the assumption that the combination of different mitigation measures will compensate for the inadequacies of each. Defendant's unexplained statement that a combination of measures will "successfully mitigate the introduction" of pests obscures this

the studies it cites.² The DSEIS also does not analyze or reveal the difficulties involved in achieving ideal conditions for even one large shipment of logs, much less the thousands of shipments that APHIS's regulations allow to enter the country.

Second, even if ideal conditions could be assured and heat treatment could be expected to be 100% effective every time it was used, the preferred alternative allows logs to be stored for up to 60 days after arrival in the United States before receiving heat treatment. This is more than adequate time for pests to disperse, and APHIS's own experts have told it so.³ The DSEIS must at least admit that heat treatment is not effective if the pests have left the logs before they are heat treated.

B. Inspections

The DSEIS assumes a perfect inspection process. DSEIS at 9-10 (the preferred alternative relies very heavily on inspectors finding the pests so that mitigation measures may be taken). The DSEIS admits, however, that "[i]nspection of all log, lumber, and unmanufactured wood shipments at the port of entry is very labor intensive. For large shipments, it is virtually impossible to carefully examine every wood article for potential plant pests. . . . the possibility of pest introduction increases if wood imports were to increase." DSEIS at 13. This critical admission is never mentioned in the discussion of the preferred alternative or in the risk assessment sections. This failure to address the risk of (1) not finding a pest during inspection and (2) failing to choose the correct mitigation measures, violates 40 C.F.R. § 1502.14 (the DSEIS must "defin[e] the issues" and "provid[e] for a clear basis for choice among the options by the decisionmaker and the public.").

By failing in its description and analysis of risk to statistically or otherwise assess a failure to find a species during inspection, or escapement of the species during the 60 days that shipments may sit untreated in U.S. ports, the DSEIS "obscures rather than highlights the uncertainties that remain even when different measures are used in combination." Slip Op. at

² The DSEIS asserts that data gaps were "taken into account," but fails to say how. See DSEIS at 32.

Dr. John I. Latin and Dr. Jeff Stone, among others, believe the proposed 60 day time frame will allow for pest dispersal in the United States. Dr. Latin notes that, while proposed shipboard heat treat and irradiation are possible solutions, neither are technically feasible, and may not be for quite some time. By failing to contemplate or even address all aspects of heat treatment in evaluating its effectiveness, the DSEIS failed to adequately "defin[e] the issues" and "provid[e] for a clear basis for choice among the options by the decisionmaker and the public." 40 C.F.R. § 1502.14

10

uncertainty. . . . [T]he EIS obscures rather than highlights the uncertainties that remain even when different measures are used in combination.

Slip Op. at 15-16.

The DSEIS fails to address this shortcoming of the original EIS. The DSEIS displays combinations of treatment methods in a series of confusing tables (DSEIS at 25-27), but adds nothing substantive to the discussion that the court found to be inadequate in the original EIS. In particular, the DSEIS is not candid about the shortcomings of individual mitigation measures. In fact, the DSEIS reads like advertising copy for log imports, rather than the "hard look" at environmental consequences that NEPA requires.

No new studies of the effectiveness of combinations of mitigation measures were performed or cited, and no new studies of individual mitigation measures were cited. In fact, the only post-1994 study cited in the DSEIS is the GAO report mentioned above -- a report that casts even more doubt on the effectiveness of APHIS's pest control program. As with the original EIS, the DSEIS does not even acknowledge that some of the past studies to which it cites found that combinations of different methods failed to control invading pests.

A. Heat Treatment

The DSEIS apparently believes that it has given a better explanation of its reliance on some "combination" of mitigation measures because it states more explicitly in the DSEIS than it did in the original EIS that it is assuming that "heat treatment" is 100% effective (DSEIS at 31). The DSEIS concludes, based on this assumption, that any combination of mitigation measures that includes heat treatment will necessarily result in "negligible" risk. DSEIS at 26.

There are several problems with this.

First, the heat treatment studies relied upon in the DSEIS are the same studies that were cited in the original EIS. Like the original EIS, however, the DSEIS fails to disclose what those studies say about the shortcomings of heat treatment.¹ As recognized in the very studies relied upon in the DSEIS, heat treatment approaches complete effectiveness only under ideal conditions. See An Efficacy Review of Control Measures For Potential Pests of Imported Soviet Limber, at 17-18, 27. The DSEIS does not analyze or reveal these caveats in

¹ The DSEIS states that the only treatments effective against all pests are (1) standard kiln drying schedules (but this has not been confirmed on logs) and (2) raising and maintaining the internal temperature of the wood to at least 71.1 C for a minimum of 75 minutes. DSEIS at 31.

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 6

16. The DSEIS therefore fails to remedy the inadequacies of the EIS as specifically criticized by the District Court.

C. Methyl Bromide

The DSEIS relies on methyl bromide fumigation as one of the mitigation measures that will be effective when used in combination with other methods, but fails to identify any other measure that is as effective as methyl bromide and that will be available once methyl bromide is phased out, just three years from now.

D. Overall Uncertainty

The DSEIS's conclusion that when all possible treatments are used in combination pest risk will become "negligible" ignores the fact that the proposed alternative does not require any of these combinations. Instead, treatment decisions are left up to inspectors. DSEIS at 9-10. The DSEIS therefore fails to disclose even what action is being proposed, much less what the environmental consequences of the proposal are likely to be.

Only a formal risk assessment that examines APIHS's preferred "combination" alternative, and that includes a discussion of the risks associated with scientific uncertainties, can provide a credible "examination" of the alternative. Such an assessment, like the prior risk assessments prepared by APIHS for imports from Chile, Siberia, and New Zealand, would have to be circulated in the scientific community for review and comment.⁴

As provided by 40 C.F.R. § 1502.22(b), before estimates can be used to address uncertainty, the DSEIS must show why further study is not warranted. The DSEIS acknowledges some uncertainty, and in fact there is much more than acknowledged in the DSEIS. Rather than seeking to cure this uncertainty, the DSEIS merely asserts that the "preponderance of evidence indicates that a measure would be effective against similar organisms...." DSEIS at 23. This assertion does not disclose the quantitative risk that the uncertainty poses. Particularly in light of the magnitude of the consequences of exotic pest introduction, the public and the decision-makers have a right to know the risk masked by

⁴ The conclusion in the DSEIS that a combination of measures will be effective is contrary to the very reports cited in the DSEIS. For example, the DSEIS includes a table abstracted from a USDA, APIHS 1991 document on Russian Timber (DSEIS at 23) to indicate the effectiveness of a combination of mitigation measures. That report, however, concluded that combinations of two, three, or more mitigation measures "... must be evaluated to determine if they are economically or operationally practical" -- an uncertainty that the DSEIS fails to address or even mention. (USDA, APIHS, 1991 at 27).

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 7

APHIS's unsupported conclusions. The question of why further research is not warranted to reduce the uncertainty is one of many questions left unanswered in the DSEIS.

III. THE DSEIS AGAIN FAILS TO ADEQUATELY ADDRESS UNCERTAINTY ABOUT THE RISKS OF INFESTATION, AND CONSEQUENTLY SKEWS THE DISCUSSION OF SUCH RISK

The Court held:

The failure of the EIS to discuss in a significant manner the uncertainties about the risks of infestation and the adequacy of control measures skews its portrayal of the risks associated with the preferred alternative. This skewed portrayal limits the usefulness of the EIS to public participation and informed decision-making.

Slip Op. at 18. The original EIS failed to disclose that the risk of infestation, as determined by risk assessments, was actually much greater than that which APIHS disclosed in the EIS. The DSEIS also fails to honestly disclose the risks reviewed in the formal risk assessments.

A. The Degree of Uncertainty Precludes A Valid Risk Assessment

The DSEIS fails to address the fact that there is so much uncertainty surrounding the risk of pest infestation under the preferred alternative that a legitimate risk assessment simply cannot be carried out. As you know, prior to the adoption of Log Import regulations, APIHS commissioned the U.S. Forest Service to conduct three risk assessments to examine risks associated with importing logs. One assessment examined risks from Siberian larch, the second examined risks from Chilean Monterey pine, Coigue and Tepa logs, and the third examined risks from New Zealand Monterey pine and Douglas Fir logs. DSEIS at 21. Each of these risk assessments express significant uncertainty about whether mitigation measures will be sufficient to prevent a catastrophic pest infestation. The DSEIS, however, does not adequately reflect this uncertainty.

The Siberian pest risk assessment, for example, states: "There is no proven way to calculate the effects of the various elements [of risk] into a combined final risk number or statement." (1991 Siberian Risk Assessment, Appendix E (Pest Risk Assessment Methodology)). The APIHS Efficacy Review Of Control Measures Of Imported Soviet Timber concludes that there are significant risks and "wide gaps in the scientific data on the efficacy of various mitigation measures." The Chilean Risk Assessment contains a summary of the major concerns expressed by forty independent reviewers, and the number one concern expressed by reviewers was that available information was "not adequate to identify all the potential risks associated with the importation of unprocessed logs from Chile." These concerns about the uncertainty of pest risk assessment are not reflected in the DSEIS.

Because the DSEIS does not explain how mitigation measures are evaluated in the risk assessment process, the public is unable to meaningfully question or assess the risk of any given combination of mitigation measures. This violates 40 C.F.R. § 1502.1 (The EIS "shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.").

The DSEIS acknowledges that there are "information gaps" as to the effectiveness of mitigation measures, and admits that "[t]he analysis noted that seldom were literature citations available that provided scientific evidence that a particular mitigation method was effective against a specific pest identified as a potential problem." DSEIS at 22-23.

Although the DSEIS was required to disclose this uncertainty (40 C.F.R. § 1502.22), the DSEIS violates NEPA by dismissing the uncertainty with the assertion that "the degree of uncertainty, however, can be reduced to a negligible level if the preponderance of evidence indicates that a measure would be effective against similar organisms or has demonstrated effectiveness over a wide variety of different organisms." DSEIS at 23.

The DSEIS does not cite to any scientific evidence to support this central conclusory statement. See *Seattle Audubon Society v. Moseley*, 789 F. Supp. 1473 (D. Wash. 1992) aff'd 998 F.2d 699 (9th Cir. 1992) (conclusory statement unsupported by empirical or experimental data, scientific authorities, or explanatory information does not satisfy NEPA). Science does not support the assertion that all pest risk can be considered "negligible" simply because a "preponderance" of the evidence shows that some pest risk can be controlled.⁶ The assertion directly violates 40 C.F.R. § 1502.24, which requires that agencies maintain the scientific integrity of their analysis by identifying and citing the scientific sources relied upon for any conclusions in the statement. Additionally, it is well settled that "[a]n agency cannot . . . avoid its statutory responsibilities under NEPA merely by asserting that an activity it wishes to pursue will have an insignificant effect on the environment."⁷ *Steamboat v. Public FERC*, 759 F.2d 1382, 1393 (9th Cir. 1985) citing *Lower Alloways Creek Township v. Public Service Electric and Gas Co.*, 687 F.2d 732, 741 (3rd Cir. 1982).

treatment only makes its conclusion with respect to a combination of alternatives more suspect.

⁶ Standards of reliability in scientific analysis are far greater than 51% if a result is predicted with a high confidence level, and "[s]cientific controversies must be settled by the methods of science rather than by the methods of litigation." *Summers v. Missouri Pacific Railroad System*, 897 F. Supp. 553, 540 (E.D. Okla. 1995) (court excluded evidence when there was no reliable scientific evidence to support a theory), citing *Underwager v. Salter*, 22 F.3d 730, 736 (7th Cir. 1994).

B. The DSEIS Does Not Adequately Analyze The Fact That The Greatest Risks Are Posed By Pests That APHIS Cannot Currently Identify

As in the 1994 EIS, the 1997 DSEIS fails to disclose and address uncertainty even as to which insects or fungus to look for when inspecting shipments. Although the DSEIS identifies a "process" that APHIS is supposed to follow when an unidentified pest is found, the DSEIS does not address the more fundamental problem of not knowing what pest to look for in the first instance. Pests that are "known" but considered not to be risks in their country of origin, for example, would not be identified through APHIS's identification process, because while the identity of the pest is known, its potential to cause harm is not. Perhaps more fundamentally, the delay time necessary to identify "unknown" pests will mean that by the time identification occurs, the pest may already be established.

The Chilean Risk Assessment states: "one of the most frequently voiced concerns among reviewers dealt with organisms that are not recognized as pests in their country of origin (in some cases due to a lack of information), but which may reach pest status when introduced into a new environment." In his comments to the DSEIS, Dr. Jeff Stone warns that introduced pathogens can undergo genetic change in a novel habitat and become a more serious threat than when originally introduced. Neither of these risks is considered in the DSEIS.

C. The DSEIS May Not Simply Dismiss Uncertainty With Unsupported Conclusions

The DSEIS describes a pest risk assessment procedure for determining the likelihood and severity of pest establishment. DSEIS at 22. The DSEIS, however, fails to discuss the use of this assessment formula in the context of combining mitigation measures for treatment of imported logs; readers are shown the criteria used in measuring risk, but not the results. The "results" are contained in table form (DSEIS at 23-26) and reveal only the effectiveness of specific treatments against specific known pests. The DSEIS does not explain how the risk assessment procedure accounts for any of the uncertainties identified in the DSEIS.⁸

⁸ The process of assessing risk is more complex than the DSEIS suggests with its tables of known effective treatments on known pests, and final, unsupported assertion of effectiveness. (DSEIS at 26). As Dr. Paul Slovic explained in his declaration of October 2, 1996: "when asserting that a combination of mitigation measures will reduce overall risk beyond reductions that could be achieved by any single measure, one should perform a thorough analysis of the specific risk factors addressed by each measure, and analyze how each measure will address risks not addressed by the other measures." Declaration of Paul Slovic at 4. The DSEIS's failure to address the specific uncertainties associated with each

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 10

The DSEIS seems purposely misleading when it concludes that "[b]y the time all steps are completed, even though some uncertainty remains, the probability of a live pest being present, escaping, and establishing a reproducing population in the United States is negligible because of the mitigation measures and the sequence in which they are applied." DSEIS at 26. As explained above, there has been no valid risk assessment that includes uncertainty. Additionally, there is no specific set of mitigation measures required for any given shipment. Under the preferred alternative, measures are decided on an ad hoc basis by individual investigators. DSEIS at 9-10. The preferred alternative contains no mention of a standard "sequence" that treatments should follow, nor any analysis of why one sequence of mitigation measures may be more effective than another sequence of mitigation measures.

IV. The DSEIS Again Fails To Adequately Address The Risks Of Noncompliance

The Court held:

Although 40 C.F.R. § 1502.22 is primarily concerned with scientific uncertainty, problems with compliance would significantly affect the effectiveness of the control measures. APHIS thus may not dismiss compliance problems as a simple problem of human honesty lying beyond the scope of the EIS.

Slip Op. at 18. The original EIS failed to discuss the possibility that shippers in some countries would not comply with the regulations, and consequently did not discuss the environmental repercussions of noncompliance. Again, amazingly, the DSEIS fails to discuss the consequences of noncompliance, other than to assert that APHIS inspectors will insure compliance, regardless of what happens in other countries. DSEIS at 34-36.

A. The DSEIS Fails To Adequately Analyze Noncompliance In The Context Of Mitigation Measures That Are Assumed To Occur In Exporting Nations

The DSEIS fails to evaluate the impact of noncompliance by exporting countries on mitigation measures. The section of the DSEIS devoted to supplementing this court-identified inadequacy is seriously flawed. It is separated from the directly related analysis of mitigation measures discussed above and at pages 23-27 of the DSEIS.

The DSEIS divides the mitigation measure analysis into two stages: (1) requirements to be met prior to entry into the U.S., and (2) requirements to be met after entry into the U.S. DSEIS at 24. Noncompliance by exporting countries seriously affects the adequacy of the mitigation measures to be met prior to entry into the U.S., and creates an impact that requires analysis but was overlooked by the DSEIS in the mitigation analysis.

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 11

By failing to include a discussion of export noncompliance in the section of the DSEIS that analyzed a combination of mitigation measures (including those conducted abroad) the DSEIS once again simply ignores noncompliance where it should be considered most -- in analyzing the effectiveness of mitigation measures. It also makes the DSEIS misleading and impossible for the public and decisionmakers to fully comprehend. This poor organization creates a document that is impossible to adequately evaluate, and violates 40 C.F.R. § 1502.8. ("Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them.");

Noncompliance by exporting countries will create significant environmental impacts that must be "full[y] and fair[ly] discuss[cd]" as required by NEPA, 40 C.F.R. § 1502.1

Despite the DSEIS's heavy reliance on overseas control measures to prevent pests from entering the country, there is no real analysis in the DSEIS of whether the control measures will actually be carried out by the exporting countries. As a result, the DSEIS fails to discuss the consequences of noncompliance. This omission is particularly puzzling because extensive evidence in the record indicates that there is substantial noncompliance with control measures -- in fact the DSEIS itself refers to over 600 instances of noncompliance. DSEIS at 41.

APHIS's response to commenters who noted that the initial EIS failed to analyze the possible consequences of noncompliance was to add penalties for violations of self-reporting requirements, and to state that "if shipments from particular imports show a pattern of recurring violations, individual importers can be suspended from issuing their own importer documents." EIS at B-6. The DSEIS similarly describes a series of penalties that can be imposed for noncompliance. DSEIS at 40-41. This, of course, is simply adding another sanction and again assuming the compliance will occur. It is not responsive to the comment or to the Court's opinion,⁷ and it does not factor noncompliance into the risk analysis or address the environmental consequences of noncompliance.

B. The DSEIS Fails To Adequately Analyze Noncompliance In The Context Of Mitigation Measures That Are Assumed To Occur In The U.S.

The DSEIS asserts that APHIS has increased its number of inspectors by 44%, so it will be well-equipped to meet the additional inspection requirements under the preferred alternative DSEIS at 34. APHIS, however, increased its inspectors to meet the increase in international trade that occurred between 1990 and 1996 -- not because of an expected increase

⁷ The non-responsiveness of the DSEIS to this and other comments violates 40 C.F.R. § 1503.4, which requires responses to not only address comments, but take action in response to comments.

necessary must be among the most significant of those potential impacts. The DSEIS, however, fails to discuss the human health impacts of wide-spread chemical treatment on people living in and near the treated area.

A. The DSEIS Fails to Identify Likely Chemical Treatments and Their Potential Impact on the Human Environment

The DSEIS is required to discuss an agency's mitigation measures in "sufficient detail" to ensure that environmental consequences have been fairly evaluated. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 333 (1989). While the DSEIS contains a general discussion of the treatments available for the eradication and suppression of pests, the document fails to discuss the effects that such suppression and eradication programs can have on human health. For example, the word "cancer" is not mentioned in this discussion.

Rather than discussing or analyzing the impacts of potential chemical treatments, the DSEIS simply refers to other sources that purportedly discuss health risks. DSEIS at 47. A simple reference to another document, however, is not a "discussion" of impacts that is "in proportion to their significance." 40 C.F.R. § 1502.2(b).⁸

The DSEIS cannot simply list all the pesticides for which risk assessments are available. The agency must indicate which of these pesticides are likely to be used in its treatment programs and the extent to which they may be applied. The DSEIS must also describe the health impacts of each potential pesticide.

In the DSEIS, APHIS admits that its list of potential pesticides is not complete and that introduction of a new pest might require the agency to use a pesticide for which a risk assessment has never been performed. DSEIS at 49. The DSEIS does not reveal, however, the potential human health impacts of such a scenario. The CEQ regulations require that if there is uncertainty or lack of information about potential impacts, the agency must cure the uncertainty or attain the information. 40 C.F.R. § 1502.22. If information is unattainable, the agency is required to state that this information is unavailable, state why this information is relevant to evaluating the foreseeable adverse impacts of the action, and summarize existing scientific evidence which is relevant to evaluating the adverse impacts on the human environment. Id.

The DSEIS does not comply with § 1502.22. The DSEIS must explain the absence of information relevant to the adverse impacts of pesticides on the human environment. This

⁸ The CEQ regulations also require that at a minimum, documents which are incorporated by reference be "briefly described." 40 C.F.R. § 1502.21. The DSEIS does not reveal even this minimum information.

in log importations (DSEIS at 33). Given the criticisms in the recent GAO report that APHIS's inspection program has failed to keep pace with its inspection load, and that the number and quality of inspections is inadequate due to the increased work load, the DSEIS is misleading when it assures the reader of adequate numbers of inspectors.

The DSEIS details U.S. programs which are intended to monitor trade for a wide variety of pathogens (DSEIS at 34). These programs are apparently already in place, but APHIS does not explain how such measures will apply to inspections of huge shipments of logs, where APHIS has concluded that through inspection is impossible. (DSEIS at 13). APHIS then disavows a "risk assessment process" for pathogen identification, and asserts that a detailed description of this process is located in Appendix C - this "detailed description" is in reality a confusing table that fails to take into account any risk assessment associated with the: (1) failure to find and/or identify a pest; (2) failure to apply the correct treatment for that particular pest; or (3) escape of pests during the pre-treatment, post-inspection holding.

Certified programs in exporting countries may result in pre-clearance, and pre-clearance may result in a less stringent inspection process (DSEIS at 38). The DSEIS, however, fails to state any details about when an inspection would be less stringent, or what a less stringent inspection would entail, or if it would deviate from the inspection guidelines in the preferred alternative. After approval of a foreign nation's program, APHIS apparently hands over the enforcement of the program to that nation's Ministry of Agriculture/Forestry, but it is unclear if that nation must fulfill any specific monitoring duties after that time (DSEIS at 40). Although there are penalties for failing to comply with required treatment conditions under cooperative service agreements, there is yet again no discussion of the impacts of noncompliance (DSEIS at 40-41).

V. THE DSEIS OMITTS SIGNIFICANT INFORMATION CONCERNING THE HEALTH CONSEQUENCES OF APHIS'S MITIGATION MEASURES

The Court found that the original EIS did not include an adequate discussion of the human health consequences of these chemical control measures. Slip Op. at 20. Any pest infestation that occurs will have to be treated with toxic pesticides, fungicides and fumigants. Pesticides can pose a great risk to human health, particularly when aerially applied to populated areas. Many are carcinogenic; others can cause birth defects and gene mutations. Although the Court was especially concerned that the original EIS did not discuss the health effects of wide-spread pesticide spraying on the people living in and near infested areas, the DSEIS also fails to directly address this impact.

The CEQ regulations require a DSEIS to discuss the impacts of agency action in proportion to their significance. 40 U.S.C. § 1502.2(b). The EIS and DSEIS purport to examine the environmental impacts that would occur if pest control measures fail, and certainly the risks to human health from the widespread use of pesticides that would be

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 14

information is necessary because the use of pesticides and fungicides may have a direct impact on human health. Southern Oregon Citizens Against Toxic Sprays v. Clark, 720 F.2d 1475, 1478 (9th Cir. 1983).

B. The DSEIS Fails to Adequately Address the Impacts of Irradiation and En Route Heat Treatment on Human Health

APHIS's limited discussion of the health impacts of its mitigation measures ignores irradiation and en route heat treatment. A discussion of the human health consequences of heat treatment is especially important, since APHIS relies heavily on this treatment measure as a means of eradicating pests from wood products. The DSEIS does not address the potential impact of heat treatment on the health of either the workers performing the treatment or the general public.

The DSEIS states that APHIS is considering radiation as a means of treating imported timber. DSEIS at 75. APHIS suggests that radiation is a viable alternative treatment, and refers to a recent USDA report which implies that impacts to human health would be minimal. *Id.* at 77. This USDA report, however, analyzed the impacts of radiation of agricultural foodstuffs. Foodstuff irradiation, APHIS admits, requires lower dosages than wood irradiation. The USDA analysis cannot therefore be used to predict the health impacts of irradiation on wood. APHIS must conduct a separate risk assessment and specifically analyze the impacts of greater dosages of irradiation on human health.

C. The DSEIS Fails to Sufficiently Discuss the Impacts of the Pests Themselves on Human Health

The DSEIS's discussion of the impact of pests on human health is limited to a repetitive discussion of potential treatment measures. The DSEIS admits that the introduction of pests may impact human health: "[s]ome life stages of the gypsy moth have been shown to produce skin irritations in humans, particularly children." DSEIS at 50. APHIS lists eleven pests which present the most risk of introduction from the import of logs, lumber and unmanufactured wood articles. DSEIS at 51. The human health impacts of these eleven pests are not addressed anywhere in the DSEIS. APHIS has a duty to address, at a minimum, the potential consequences of exposure to these eleven probable pests.

APHIS's emphasis on the health risks of pests stands in stark contrast to its non-discussion of the health risks of aerially applying toxic pesticides to control these pests.

Jack Edmundson
Animal and Plant Health Inspection Service
February 9, 1998
Page 15

VI. THE DSEIS DOES NOT COMPLY WITH NEPA'S PLAIN LANGUAGE REQUIREMENT

40 C.F.R. § 1502.8 requires that environmental impact statements to be written in "plain language . . . so that decisionmakers and the public can readily understand them." EIS's must be written "in clean, concise, easily readable form so as to provide a reasonably intelligent non-professional an understanding of the environmental impact." Warm Springs Dam Task Force v. Gribble, 378 F. Supp. 240, 252 (N.D. Cal. 1974), *aff'd*, 621 F.2d 1017 (9th Cir. 1980). EIS's must also "be organized and written so as to be readily understandable by government decisionmakers and by interested non-professional laypersons The more complicated the science underlying those consequences is, the more challenging the preparer's task will be to convey the information clearly." Oregon Environmental Council v. Kunznan, 817 F. 2d 484, 493 (9th Cir. 1987).

The DSEIS does not clearly convey the proposed action and its environmental consequences. Moreover, the DSEIS does not plainly discuss the effectiveness and impacts of the action's alternatives. For example, APHIS attempts to articulate its decisionmaking process by contrasting its six alternatives in matrix form (DSEIS at 60). This matrix ranks the six alternatives by both their ability to exclude pests and their potential impacts on seven areas of environmental concern. The DSEIS, however, fails to explain the criteria for each of these numerical rankings. Each category appears to have its own ranking criteria, but these criteria are confusing and difficult to understand. APHIS further confuses the reader by including in its matrix a table entitled "sources of uncertainty," but failing to provide a way to integrate these uncertainties into the reader's decisionmaking.

VII. THE DSEIS FAILS TO ADEQUATELY ADDRESS THE ENVIRONMENTAL CONSEQUENCES OF THE VARIOUS ALTERNATIVES


The original EIS violated NEPA by failing to disclose adequately and compare the environmental impacts of the listed alternatives. Under NEPA, the agency must present the environmental impacts of the alternatives in comparison form so that issues can be sharply defined and a clear basis for choice can be established. 40 C.F.R. § 1502.14. The court held that the EIS impermissibly downplayed the differences between the alternatives and "minimiz[ed] both the environmental drawbacks of the more lenient alternatives and the environmental benefits of some of the stricter alternatives." *Slip Op.* at 26.

The DSEIS does not correct the flaws of the original EIS. Instead of discussing the collective environmental impacts of each alternative, the DSEIS discusses the effectiveness of each alternative with respect to eight individual environmental consequences. The DSEIS ranks, from 1 to 6, each alternative's impact on forest resources, biodiversity, ozone depletion, global climate change, human health, cultural resources, and endangered/threatened species.

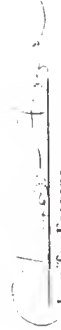
CONCLUSION

Unfortunately, the DSEIS appears to be simply an attempt to more effectively paper over a decision APHIS has already made, rather than an attempt to seriously reconsider the decision after taking a hard look at potential environmental consequences. We respectfully suggest that you withdraw the DSEIS and prepare a new DSEIS that conscientiously addresses both new information and the court's concerns with the original DSEIS.

Respectfully submitted,


Michael Axline
Counsel for ONRC, PERC, and NEC


Jenna App
Legal Intern


Jennifer Firoz
Legal Intern

The DSEIS does not compare in narrative fashion, however, the overall impacts of each alternative. Instead, APHIS relies on a matrix summary that contrasts the numerical rankings of each alternative. DSEIS at 60. The DSEIS fails to adequately explain how APHIS determined these numerical rankings. The matrix also fails to explain how various sources of uncertainty might effect the success of each alternative.

This confusing and misleading matrix summary violates NEPA because it fails to provide the reader with a clear basis of choice among alternatives, and fails to explain the agency's reasoning. 40 C.F.R. § 1502.14.

VIII. THE DSEIS FAILS TO EXPLAIN WHY APHIS SELECTED ITS PREFERRED ALTERNATIVE

The DSEIS does not contain a discussion of APHIS's rationale for choosing its preferred alternative. At best, the reader can infer that Alternative 2 was chosen because it is a "middle of the road" option that restricts the importation of raw lumber without excessively impeding free trade.

It is particularly important that APHIS set forth its rationale for selecting the preferred alternative here because the preferred alternative (Alternative 2) appears to conflict with the very purpose of adopting the regulations in the first instance.

The original EIS stated that "the sole function of these proposed regulations is to protect American natural resources from the potentially devastating effects of introduced plant pests." EIS at 2. The DSEIS reiterates this purpose and states that the proposed regulations are intended to "minimize the risk of plant pest introductions associated with the importation of logs, lumber and other unmanufactured wood articles into the United States." DSEIS at 8.

The DSEIS fails to explain how Alternative 2 will better meet these stated purposes than other alternatives that were considered but not selected. Alternative 4, for example, would appear to be more protective of the environment because it requires the treatment of all woodpacking materials. Alternative 6 also appears to be more protective because it prohibits the importation of any unmanufactured wood articles from areas outside of Canada and Mexico. These two alternatives appear to better fulfill the purpose of APHIS's regulations. The DSEIS should address why these two alternatives were rejected and why a less restrictive alternative was chosen.

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33

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February 9, 1998

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Environmental Protection Officer
Environmental Analysis and Documentation
Policy & Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Importation of Logs, Lumber and Unmanufactured Wood Articles --
APHIS Draft SEIS

Dear Mr. Edmundson:

On behalf of McPhillips Manufacturing Company, Inc. ("McPhillips") of Mobil Alabama, I am writing to comment on the Draft Supplement to the Environmental Impact Statement ("Draft SEIS") regarding regulations on the "Importation of Logs, Lumber, and other Unmanufactured Wood Articles." 7 C.F.R. §319.40.

McPhillips disagrees with the legal conclusions of the U.S. District Court for the Northern District of California when it enjoined the further issuance of import permits under these regulations; nonetheless, the company is fully committed to working with the agency to develop the most comprehensive and factual environmental impact statement possible, thus allowing continued trade and mitigation of possible pest and pathogen risk.

McPhillips participated in the development of the Animal Plant Health Inspection Service ("APHIS") import regulations since the beginning. As a then-potential (and now in fact) importer of wood products from Chile, McPhillips understood the balance that had to be reached by federal policy makers. While APHIS' role was (and is) to ensure the protection of U.S. natural resources from the effects of introduced plant pests, that had to be balanced against U.S. commitments to trading partners that such protections would only be applied to the extent necessary and not be used as a barrier to trade. McPhillips believes the right outcome was reached in the published regulations, and finds the information in the Draft SEIS more than sufficient on which to base that decision.

BALL JANIK LLP

Mr. Jack P. Edmundson
February 9, 1998
Page 2

First, let us consider the old system under which unmanufactured wood products were imported into the United States. It was an ad hoc process of visual inspection at the port of entry with no systematic means of mitigating pest risk in either the county of origin or in the United States. The system (or lack of system) was neither an effective protection against the introduction of exotic pests nor an efficient commercial means to clear imports. That is why McPhillips and others who had to work with the system were very supportive of the development of standardized and transparent import regulations. The regulations have provided protection against pest and pathogen infestation, but still allowed the regular flow of commerce.

While McPhillips and many other industry members regarded the final 1995 regulations to be a practical solution in mitigating pest risk, the court found the environmental impact statement underlying the regulations inadequate. *Oregon Natural Resources Council v. LPHS*, Civil No. 95-4066-CW (No. Dist of Cal., Feb. 27, 1997). Three weaknesses in the EIS were cited by the court:

- 1) it assumes without adequate examination that individually ineffective control measures will be effective collectively;
- 2) it omits information regarding uncertainties in the risk assessments concerning compliance by exporting countries and the health consequences of possible mitigation measures; and
- 3) it does not adequately discuss the different environmental impacts of the various alternatives.

The purpose of an environmental impact statement ("EIS"), required under the National Environmental Policy Act ("NEPA"), is to ensure that environmental protection is infused into the ongoing programs and actions of the Federal government. 40 C.F.R. §1502.1. An EIS does this by requiring the agency to examine and disclose all relevant information regarding the environmental impact of the Federal action, with the expectation that the decision-maker will then make an informed decision. While NEPA procedurally requires this recognition and exposure of possible environmental impacts, it does not prescribe a substantive result. *Salmon River Concerned Citizens v. Robertson*, 32 F.3d 1346 (9th Cir. 1994). It is merely the action of adequately disclosing the information that satisfies the statute. This supplemental EIS, although it comes to the same conclusion as the earlier EIS -- provides additional information which should satisfactorily address the court's concerns.

Since the regulations were implemented in 1995, McPhillips has developed substantial knowledge and experience with the importation of wood products from Chile, from the forest to the U.S. port of entry and beyond. This company understands the risks posed by importation and the procedures that are environmentally effective and commercially practical

BALL JANIK LLP

Mr. Jack P. Edmundson
February 9, 1998
Page 3

The experience of the McPhillips Company in Chile and other companies who have imported similar products indicates that each individual mitigation measure considered by APHIS is, individually and collectively, helpful in minimizing the risk of pest infestation. The use of saw log quality trees, debarking, fumigation and segregation each reduces the possibility of pests. Moreover, kiln drying before shipment virtually eliminates pest risk (providing the wood is not thereafter reexposed to infestation). McPhillips' method of treatment and transportation -- using kiln dried wood shipped in fumigated containers -- uses a combination of mitigation measures to provide the utmost pest protection. The Draft SEIS accurately explains the progression of protection -- from some to total -- provided by each individual mitigation measure.

The Draft SEIS also acknowledges that this type of evaluation carries with it so many variables in fact that a precise prediction of a situation and its effect is problematic. To the extent that it can, the Draft SEIS addresses the uncertainties regarding the pest risks posed and the efficacy of control methods. Since many insects do not present themselves as hazards in their own environment, but may do so relocated in a U.S. habitat, it is very difficult to predict every case that poses a threat. Similarly, the variables in the possible human health effect arena are also replete. While certain control measures may have negative effects on human health, the failure to take any action may pose a commensurate threat. Considering the variety of factual possibilities and inherent uncertainties, the proposed regulations, as documented by the SEIS, establish a process and system which provides a negligible level of risk.

In its comparison of the environmental effects of the various alternatives, the Draft SEIS fully and accurately represents the differences among the options available and the possible environmental consequences of each, if selected. While the preferred alternative -- regulations allowing the importation of unmanufactured wood products under certain conditions -- carries risk, it is not an unacceptable risk balancing all other considerations.

After review of the Draft SEIS, McPhillips agrees with APHIS that the preferred alternative for action is Alternative 2 -- the proposed regulations. Requiring much more proactive protection absent a stronger showing of probable risk would be unnecessary and inconsistent with the spirit if not the letter of the "Agreement on the Application of Sanitary and Phytosanitary Measures" (General Agreement on Tariffs and Trade, 1994).

As previously stated in this comment, good public policy dictates that protection from pest risk be balanced against the United States avowed position of free and open trade. To the extent that phytosanitary regulation is appropriate, and we believe it is, it should be implemented in the manner most effective but least disruptive to trade. McPhillips believes that the regulations, based upon the previous EIS and the information outlined in the new SEIS, strike such a balance. We support the continuation of the existing import protocol and trust that the court will find sufficient documentation in the new SEIS to uphold their validity.

L. JANIK LLP

Mr. Jack P. Edmundson
February 9, 1998
Page 4

We appreciate the opportunity to comment on the Draft SEIS. McPhillips and other participants in this market urge the agency to move promptly toward a resolution of this matter with the court so that ongoing trade disruption is minimized.

Sincerely,

Irene Ringwood

Irene Ringwood



Jonathan S. Leo, Chair, Board of Directors

34
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February 9, 1998

Mr. Jack P. Edmundson
Policy and Program Development, APHIS
US Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Importation of Logs, Lumber and Other Unmanufactured Wood Products—Draft Supplement to the Environmental Impact Statement, December 1997.

Thank you for allowing Pacific Environment and Resources to comment on the Draft Supplemental Environmental Impact Statement for the Importation of Logs, Lumber and Other Unmanufactured Wood Products. Our comments are enclosed. Despite APHIS' assertions that the proposed regulations will protect U.S. forests from pests and pathogens imported on foreign logs, lumber, and unmanufactured wood products, we are unfortunately compelled to point out that the DSEIS does little to correct either the substantive or the procedural inadequacies that led to the court finding of the inadequacy of the first environmental impact statement.

Exotic pests on unprocessed wood coming from other countries are nearly impossible to detect. Once established in the United States, these pests could literally destroy entire forests. The elimination of American Chestnut and native elm species on the East Coast are examples of how invading pests from other countries can wipe out entire tree species.

Environmental organizations, private landowners, and timber industry representatives are understandably nervous about raw log imports. These imports may provide short-term benefits for a very few mills but they pose long term risks of catastrophic destruction of entire forests. If that happens, the entire wood products industry will suffer monumental impacts.

The economic and environmental impacts on the United States that would result from introducing exotic pests and pathogens on imported logs, lumber, and unprocessed wood products would be huge. Anything less than a complete ban will be putting the forests and economy of the United States at unnecessary risk, potentially leading to disaster. The potential economic damage resulting from the introduction of exotic pests and pathogens to U.S. forests far outweigh any potential economic gain to the U.S. timber industry from importing these materials. Furthermore, it is irrational for the U.S. to be exporting high-quality logs to Asian countries while importing low-quality logs and lumber that may be infested with pests and pathogens. We urge APHIS to reverse this irrational situation by keeping American logs in the United States and keeping foreign logs out. Given the lack of economic necessity or benefit for the United States to import logs, lumber, and other unmanufactured wood products, we urge APHIS to adopt its Alternative "6" — prohibition of importation of unmanufactured wood — as the most appropriate and safest alternative.

As currently written, the DSEIS does little to address the many substantiated concerns about the proposed rules. These concerns have been provided to APHIS repeatedly. Although APHIS acknowledges these concerns, the DSEIS shows that APHIS has not taken these concerns into consideration during the development of the proposed rules. Of particular concern is that APHIS has not changed its proposed rules to ban all imports from Russia despite overwhelming evidence that such imports would put both American forests and the global climate at extremely high risk.

Without substantial changes, the plaintiffs in the original lawsuits against APHIS will be forced to continue their objection to the proposed rules. It is unfortunate that APHIS has not used the intervening time to address the major weaknesses in the proposed regulations and the Environmental Impact Statement.

Sincerely,

David Gordon
Acting Executive Director

David Martin
Program Associate



Jonathan S. Leo, Chair, Board of Directors

February 9, 1998

Mr. Jack P. Edmundson
Policy and Program Development, APHIS
US Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Importation of Logs, Lumber and Other Unmanufactured Wood Products—Draft Supplement to the Environmental Impact Statement, December 1997. (SEIS)

The Pacific Environment and Resources Center submits the following comments on the Draft Supplement to the Environmental Impact Statement (Draft SEIS). The Draft SEIS fails to adequately address many of the concerns raised by the Court of the Northern District of California, as well as other deficiencies in the original EIS. The Final SEIS should more adequately address the following issues.

Compliance by exporting countries

The requirements for importing unmanufactured wood products rely extensively on mitigation measures taken prior to entry of the articles into the United States. These requirements were developed because port inspection upon entry into the United States is not sufficient to protect against harmful pests. These mitigation measures include heat treatment, fumigation, debarking, and segregation of treated wood articles. APHIS has no direct inspection mechanism to ensure that these required measures are followed. Rather, APHIS relies on a system of self-certification by the exporter and importer. This raises a major problem of ensuring compliance with these mitigation measures.

The Court found that the previous EIS did not adequately evaluate how compliance problems abroad might limit the effectiveness of import requirements. APHIS recognizes that noncompliance increases the risk of importing harmful pests (p. 41). Yet the Draft SEIS does not address the issue, other than stating that APHIS will diligently enforce its regulations. There is no mention of any new enforcement programs, increased penalties, fines, revocation of import licenses, etc. This is inadequate to ensure the safety of US forests.

The Draft SEIS states it is "also [APHIS]'s position that, if the risks or costs of getting caught are not sufficiently high, the violators will continue with impunity." (p. 41). In Fiscal Year 1996, APHIS closed a total 598 cases (of 632) involving violations of import regulations, and a total of \$120,002 in civil penalties were assessed (p. 41). This 1996 total (for all products, not just wood

imports) represents just 0.0024% of the value of unmanufactured wood products imported into the United States in 1990 (p. 1; since imports have increased significantly since 1990, this percentage for 1996 will be even lower). The average penalty for 1996 cases was \$200. While individual penalties were undoubtedly higher than this, it does not speak well to the deterrence qualities of APHIS penalties. APHIS must consider the serious threat posed by non-compliance when developing and evaluating regulatory alternatives.

Impacts of alternatives

The Court found that the original EIS failed to adequately discuss the differences between regulatory alternatives. The Draft SEIS does not correct this deficiency. While it does contain a graph that ranks the alternatives according to various potential impacts, there is no substantive discussion of these differences, or their relative significance. The difference between a ranking of "1" and "2" may be minimal, or very large. The Draft SEIS does not consider an alternative of stricter regulation that falls somewhere between the regulations in Alternative 2, and the total prohibitions on imports (except packing materials) in Alternatives 3-6. There is also no explanation of why APHIS chose Alternative 2 as the preferred alternative. Alternatives 4 and 6 rank higher than Alternative 2 in every category listed, and offer much greater protection for American forests and citizens. Given this, and the fact that the economic benefits of importing unmanufactured wood products have not been adequately demonstrated, we recommend APHIS adopt Alternative 4 or 6 and the regulatory standard.

The Draft SEIS states that Alternative 2 indirectly encourages harvesting of plantation trees, and so its biodiversity ranking may underestimate its environmental benefits. First, the Draft SEIS claims that plantation trees pose a lower pest risk (p. 64). While this may be true of healthy plantations, the Draft SEIS fails to take into consideration the fact that plantations (that consist of only one or a few tree species) are highly susceptible to disease and pest infestations. Pest infestations of plantations regularly occur. Second, the Draft SEIS claims that plantations reduce pressure on native forests (p. 64). Unfortunately, native forests are being cleared worldwide at alarming rates in order to free land for plantations, which are often used to grow non-native tree varieties that bring higher profits. Many of the forest fires that recently ravaged Indonesia were caused by fires deliberately set to clear land for oil palm plantations. So rather than underestimating the environmental benefits of Alternative 2, the Draft SEIS likely overestimates them. Greater reliance on plantation trees will increase rather than decrease degradation of biodiversity in native forests.

The Draft SEIS also makes questionable assumptions about the effects of stricter regulation. First, it claims that stricter regulations would decrease demand for foreign wood products, and thereby increase pressure on American native forests (p. 63). It is equally likely that stricter regulations would encourage American companies to establish plantations on lands they have already harvested, especially considering increasing pressure from the American public to protect what few pristine forests we have left.

Second, the Draft SEIS fails to consider the volume of wood products that are exported from the United States. Currently, the United States is the largest importer of wood products (p. 1), and

one of the largest exporters. According to the US Department of Commerce, in 1995 the United States exported 12.7 million cubic meters of hard and softwood logs, 6.9 million cubic meters of hard and softwood lumber, and 5.5 million metric tons of hard and soft wood chips. Also according to Department of Commerce data for 1995, the United States was a net exporter of hard and softwood logs, softwood chips, hardwood lumber and many other products. Restricting or prohibiting these exports (a common practice in many countries) would provide American companies the greater supply of materials they are seeking, without increasing pressure on American or other forests or opening US forests to the unnecessary risks of exotic pest infestations from imported wood products.

The discussion of differences between alternatives in the Draft SEIS is clearly still inadequate.

Efficacy of combinations of control measures

The Court found that the original EIS did not adequately support the assumption that individually ineffective control measures will be effective collectively. The Draft SEIS does not correct this problem. It explains the process of risk assessment, and lays out a chart outlining the effectiveness of various methods. However, no risk assessment has been done to evaluate the true effectiveness of combinations of alternatives. These assessments must be performed before APHIS can consider them effective.

Risk Assessment and adequacy of control measures

The Court found that the EIS did not adequately discuss uncertainties about the risks of infestation and the adequacy of control measures. Unfortunately, this is still the case with the Draft SEIS. APHIS continues to acknowledge the uncertainties inherent in risk assessment regarding both pests and the efficacy of control measures. However, the Draft SEIS makes no mention of any ways to mitigate these uncertainties, and fails to discuss how these uncertainties affected the evaluation of regulatory alternatives. The USDA has determined that certain wood products from Chile and New Zealand pose a high risk, yet they are subject to less stringent regulation than those imposed by the universal requirements. The regulations that govern imports from Russia are not adequate given the high risk posed by wood products from Siberia and the RFE. APHIS must discuss these inadequacies in greater detail, and address these concerns.

New treatment methods

The Draft SEIS lists two new treatment methods that APHIS is considering for inclusion in new regulations. The first, heat treatment of logs during shipment (in the holds aboard ships) has never been tested, and no prototype equipment exists (p. 75). Before it can be considered as an option, the efficacy of this technology must be properly demonstrated. In addition, since this treatment takes place on the open ocean, rather than at a fixed facility, it is almost impossible to ensure compliance. This risk must also be adequately assessed before approval.

The second method, irradiation, is equally problematic. The efficacy of this method has also not been adequately demonstrated. Nor have there been any further advances in developing

feasible treatment facilities (p. 77). Ensuring compliance with this method will be at least as difficult as with other methods. In addition, the Draft SEIS glosses over the severe health concerns associated with irradiation. An accident at a facility, or during transportation of the hazardous materials required by these facilities, would have very dire consequences. This poses a particular risk for Russia, whose nuclear industry is notoriously unsafe.

Before any new treatment method can be approved, a new risk assessment must be required. This assessment must be based on actual tests, using the proposed equipment, rather than simply theoretical data. Any new treatments should only be approved after a full EIS process, with publication in the Federal Register and the associated public participation requirements.

Specific problems for imports from Russia

The 1991 USDA Risk Assessment for wood from Siberia and the Soviet Far East concluded that logs from these regions pose a great threat for American forests. The Draft SEIS fails to adequately address this risk, or many other problems related to importing wood products from Russia.

Biodiversity/Climate change

In preparing the Draft SEIS and evaluating alternative regulatory schemes, APHIS must take into consideration the affects these alternatives will have on biodiversity. This includes both effects of exotic pests on North American biodiversity, and effects of logging of native forests in exporting countries (p. 63). The Draft SEIS contends that the proposed regulations (Alternative 2) will encourage harvesting of plantations (p. 60), yet acknowledges that exports from Russia will come from native forests, not plantations (p. 20). The Draft SEIS further acknowledges that timber operations in Siberia often do not include reforestation (p. 65). Therefore, increased American demand for Russian wood products will put increased pressure on Russian forests, and lead to increased habitat destruction and loss of biodiversity. These forests are home to many threatened and endangered plant and animal species (including the Siberian tiger, Amur leopard and Japanese crane).

Russian forests also comprise more than 25% of the world's remaining frontier forests. They therefore serve as valuable carbon sinks to protect against global warming. The Draft SEIS acknowledges that the lack of reforestation in Siberia has a "great potential for contributing to global climate change." (p. 65). But while recognizing these threats to biodiversity and global climate change, the Draft SEIS does absolutely nothing to address or mitigate these problems.

Russia requirements unclear

Provisions in the Draft SEIS concerning importation of logs and other wood products from Russia are unclear. The Draft SEIS states that there are stringent regulatory requirements for wood articles imported from Siberia and Soviet [Russian] Far East (p. 51). Specific requirements are listed for wood products from Chile and New Zealand (p. 24). There is no mention or indication that special requirements exist for Russia. Table 4-7 (p. 55) lists requirements for specified articles, including radiata pine from Chile and New Zealand, and

Douglas fir from New Zealand. Again, larch or pine species from Siberia and the Russian Far East (RFE) are apparently not subject to any special requirements.

APHIS has placed special restrictions on wood products from much of Asia. According to Table 4-7, temperate hardwoods from areas of Asia east of 60° East Longitude and north of the Tropic of Cancer (Asia restriction) are ineligible for imports unless allowed under the universal importation requirements. However, no mention is made of temperate softwoods (i.e. larch and pine). It is therefore unclear whether the Asia restriction applies to temperate softwoods. Softwoods from Siberia and the Russian Far East likely pose a greater threat than hardwoods. It is also unclear whether this restriction applies to packing materials. Softwoods and packing materials are two potential sources of exotic pests, and this risk must be addressed by APHIS.

The Asian restriction was put in place because wood articles from this area "have been found to be severely infested with numerous pests and reinfestation is likely to occur." (p. 27) Under the universal importation requirements (Table 4-8, pp. 56-7), the exact extent of the Asian restriction is unclear. Raw lumber from "those places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer" is ineligible for import. (Emphasis added). Does this mean where the wood originated, or where it is shipped from? This vagueness might allow exporters to evade the restriction by transporting logs to ports within the country of origin that lie outside the restriction, or to ports in another country. Wood chips, however, are ineligible if they are "from Asian countries that are wholly or partially east of 60° East Longitude and north of the Tropic of Cancer." (Emphasis added). This language eliminates some of the vagueness of the raw lumber requirements, but still does not clearly state whether the restriction applies to place of origin or export.

Finally, it is unclear if this restriction applies to wood products from Russia. The area east of 60° East Longitude and north of the Tropic of Cancer includes all of Siberia and the RFE (along with a large part of European Russia). Therefore, restrictions on raw lumber should apply, but might be circumvented by exporting from western ports. Since Russia is considered a "European" rather than "Asian" country, the status on restriction of wood chips is unclear. APHIS needs to adopt a single, clear standard for the Asia restriction, and ban all imports of unmanufactured wood products from Russia.

Russian compliance problems

The requirements for importing unmanufactured wood products rely extensively on mitigation measures taken prior to entry of the articles into the United States. The current political and economic situation in Russian ports makes accurate certification of compliance with mitigation requirements impossible. First, the political situation in Russia is still very unstable, and lines between federal and regional authority are often unclear. This has resulted in an incoherent export policy and unclear or conflicting regulations. Second, there are simply not enough Russian officials to monitor the booming export industry. Third, ports in the RFE are often highly disorganized. There is no way to monitor specific shipments. There are often delays of several days to load and unload shipments. Some customers receive incorrect shipments. In addition, shipments of timber from different areas are mixed, and treated timber is commingled

with untreated (rendering the treatment useless). Clearly, Russia lacks the "physical infrastructure to ensure compliance" (p. 41) with mitigation requirements.

Russia should also be considered an area of "high crime in areas of international trade." (P. 42) Government regulators are known to be subject to widespread corruption. Illegal trade is flourishing as a result of corruption among border officials. Mafia influence over both ports and the timber industry is well known. The economic incentive to allow illegal (untreated) timber shipments is very high. This certainly makes any system of "self-certification" highly suspect.

The logistical confusion and economic incentive to fabricate compliance make any port assurances of compliance with treatment requirements highly unreliable. The only way to effectively ensure compliance would be to assign an APHIS inspector to follow each individual shipment from start to finish. Since this is clearly impractical, APHIS is forced to rely on inspection after the articles have entered the United States as the main, if not sole, line of defense against invasive pests.

As stated in the Draft SEIS (p. 69), the 1997 General Accounting Office (GAO) report on the effectiveness of the APHIS Agricultural Quarantine Inspection (AQI) program found that "port inspection as the sole line of defense has weaknesses that are difficult to overcome." This is the reason that the wood import regulations were developed. Since it is very likely that future shipments of wood products from Russia will be infested, and it is likely that port inspection in the United States will not detect this infestation, any imports of wood products from Russia are very high risk. The Draft SEIS fails to adequately address this risk.

Imports from Russia should be banned

As demonstrated above, there are a number of serious problems associated with importing wood products from Russia. Importation would increase pressure on native Russian forests, leading to a loss of biodiversity and an increased rate of global climate change. Imports from Russia are a high risk for carrying exotic pests. Due to a lack of the necessary physical infrastructure, and widespread corruption, compliance with mitigation measures at Russian ports cannot be assured. Inspections at American ports are insufficient to prevent the introduction of exotic pests. For these reasons, APHIS should ban the importation of all unmanufactured wood products from Russia.

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FOREST RESOURCES

35
2/10/98

February 10, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: APHIS Draft Supplemental EIS

Dear Mr. Edmundson:

APHIS is to be congratulated on its timely and professional development of the Draft Supplemental EIS. The EIS fully addresses the inadequacies identified in the judge's order and was completed on schedule. We now urge the agency to complete its review and publish a Final Supplemental EIS, report back to the District Court on May 15th to explain the findings of the SEIS, and seek a lifting of the injunction against the issuance of new permits.

APHIS should be commended for its vision in developing the phytosanitary regulations in light of recent increases in the importation of unmanufactured wood articles. The risk assessments conducted by the Forest Service and APHIS identified potential problems, as well as control procedures and measures to minimize those risks. This was followed by the development of an EIS addressing the range of possible regulatory procedures to accomplish the agency's mission.

Early on in this process going back to 1992, AF&PA identified several key objectives for the APHIS EIS and regulations. Those objectives included: (1) protect U.S. forests from introductions of exotic pests; (2) avoid unnecessary delays and barriers to entry of imported wood products; (3) minimize administrative and compliance costs; and (4) establish a

predictable regulatory climate that is consistent with overall trade policy objectives. Those objectives are still relevant six years later.

We believe that the EIS process followed by APHIS and the resulting regulations issued in 1995 achieve the objectives established by the forest and paper industry. In particular, we believe that the regulations are more effective in mitigating the risks associated with importing wood articles than relying on inspections at port facilities. The agency has anticipated a potential problem and has appropriately responded to fulfill its mandate to protect the forests of the U.S. from exotic pests and diseases.

Nonetheless, in February, 1997, a U.S. District Court found the original environmental impact statement (EIS) prepared by APHIS as part of the adoption of the 1995 regulations to be inadequate in three narrow respects:

- (1) APHIS did not adequately explain the uncertainty as to whether the combination of individual mechanisms to control pest introductions will be effective;
- (2) APHIS did not present an adequate discussion of the uncertainties in the various risk assessments and mitigation measures, including compliance abroad and human health impacts from use of pesticides to control an infestation should one occur; and
- (3) APHIS failed to adequately discuss the different environmental impacts of the alternatives.

In June, 1997, the District Court enjoined the issuance of new permits by APHIS for certain unmanufactured wood products until the agency supplements its EIS in the above areas. In response to the District Court's findings and subsequent injunction, APHIS immediately proceeded to seek public input on the scope of issues to be addressed in a Supplemental EIS. A Draft Supplemental EIS was completed in December, 1997 and has been circulated for public review and comment.

Major Findings:

Based on AF&PA's review of the Draft Supplemental EIS, we have arrived at the following findings and conclusions:

1. The SEIS is procedurally adequate and fully responds to the District Court's order to address certain inadequacies in the three identified areas. APHIS's request for comments on the scope of the SEIS, while not required by NEPA, demonstrated the agency's fulfillment of the spirit and intent of the NEPA process.
2. Based on the SEIS and several case studies conducted by the industry, we believe that the existing APHIS procedures and requirements are adequate to protect U.S. forests from exotic pests, while bringing regulatory certainty to the process of importing unmanufactured wood articles. Because of the proven adequacy of the existing regulations, AF&PA sees no need to

modify the APHIS regulations for wood imports. We recommend that APHIS present this finding to the District Court in May and seek a lifting of the injunction on new permits for certain wood imports.

3. AF&PA finds that APHIS's resources have been appropriately reallocated to address the increased demand and importation of unmanufactured wood articles into the United States. Funding and staffing increases of 78 and 44 percent, respectively, demonstrate a strong commitment to strengthening the agency's Agricultural Quarantine Inspection (AQI) program in order to carry out its mission

The agency should seek additional appropriations as necessary, while also seeking out additional cooperative relationships with state agricultural and forestry agencies, to aggressively carry out implementation of the regulations. Additional leveraging of state resources to protect the forests of the nation and states is consistent with the need for a strong federal/state partnership.

4. APHIS should continue to collaborate with exporting countries to ensure that appropriate procedures and controls are in place and periodically updated as more information becomes available to minimize the risks of pest and disease infestation.

5. The Montreal Protocol for the protection of the Ozone layer has determined that preshipment and quarantine uses of Methyl Bromide are so important that these uses are exempt from the phase-out schedules for developed countries. At the same time, the Clean Air Act requires all uses of methyl bromide to be phased-out by 2001. Thus, the benefits of methyl bromide fumigation will not be available in the U.S. to control insects and diseases that may be detected once they arrive in the U.S. This is a major disadvantage for the U.S. and will have the effect of reducing the capability of APHIS to control pests if detected on imported products, whether wood or other products

6. AF&PA is concerned about the possible use of phytosanitary regulations as de facto barriers to the international trade in wood products. AF&PA believes that any decisions to regulate the importation of wood products must be based on sound science and be fully justified. The supplemental EIS helps clarify the scientific basis for the APHIS phytosanitary regulations and should help mitigate charges that the regulations are not based on sound science

APHIS should move to expeditiously complete the final SEIS and seek a lifting of the injunction as soon as possible to limit the U.S. exposure to retaliation and charges that its importation policies violate WTO policies and agreements on appropriate phytosanitary standards

Detailed Comments on the SEIS:

APHIS does a very good job of discussing the serious implications of exotic pest and disease infestations on the health and productivity of U.S. forests. The discussion indicates that

past infestations have been largely caused by the introduction of pests from imports of non-wood products and experimentation. Later in the SEIS, APHIS points out that no such infestations have been detected as a result of the newly instituted unmanufactured wood article regulations. This is a major finding that should be highlighted in the summary of the document for the information of the reader.

This finding with respect to the sources of infestation serves to emphasize the importance of ensuring that phytosanitary regulations on other imported products are as effective as the wood importation regulations. AF&PA and its members are generally more concerned about insects and diseases being introduced into the U.S. on products other than wood.

Given the seriousness of past pest infestations, the U.S. has done more research and investigation into plants pests and diseases than any other country in the world. While the SEIS focuses primarily on the uncertainties and the inadequacy of current information, as ordered by the District Court, APHIS should acknowledge the long history of USDA and other agency research in entomology and pathology. While information is always limiting, the U.S. has the best data bases, most complete infrastructure, and most highly trained professionals in the world to now protect U.S. forests from pest and disease infestations.

Efficacy of Combinations of Methods:

The discussion of the efficacy of combinations of methods is of particular interest to AF&PA as we evaluated whether the regulations are effective. While we want to ensure that U.S. forests are protected, we are also concerned that by combining individually effective control mechanisms, the regulations should not be overly restrictive and burdensome, with no proven purpose or value. In order to evaluate and demonstrate the effectiveness of individual and collective mitigation measures, APHIS conducted pest risk assessments from 1991 through 1993 for larch logs from Siberia and the Russian Far East, Monterey pine and Douglas-fir from New Zealand, and Monterey pine, coigue, and tepa from Chile

These risk assessments were conducted by multi-disciplinary teams of experts from the Forest Service, academia, the private sector, and other government agencies. The Teams visited each country and evaluated organisms that demonstrated the potential for risk against the potential mitigation measures that would be effective in mitigating that risk. AF&PA provided review and comment on each of the three risk assessments conducted by APHIS and found them to be very professional and thorough. The Executive Summaries and Conclusions of these important documents should be attached as Appendix material in the Final EIS.

Based on our review of the original risk assessments and the analysis of the risks as outlined in the SEIS on pages 19-32, AF&PA believes that the combination of requirements imposed, both before shipment and after arrival in the U.S., are sufficient to ensure that pests do not accompany the imported logs. In some cases, the mitigation measures are redundant from

step to step and provide multiple opportunities to use known and effective measures to eradicate pests. However, AF&PA believes this redundancy is appropriate, and in some cases necessary, to ensure that the risks to U.S. forests are negligible. See the Weyerhaeuser case study of imported Radiata Pine for a detailed analysis of individual treatment techniques used in combination.

AF&PA also agrees with the decision by APHIS that certain wood articles from the Asian Far East should be subject to a higher level of scrutiny and regulatory control due to the relatively higher risks of pest infestation. However, the Far East and Siberia will become increasingly important in providing wood fiber to meet growing world demand for wood products. As such, AF&PA urges APHIS to continue efforts to investigate the efficacy of irradiation and microwave treatments to ensure the safe importation of wood from this region of the world.

A major finding of the SEIS is that the combination of requirements imposed on shipments from New Zealand and Chile before they enter the U.S. will result in "extensive to total reduction of the risk that a live exotic pest will remain with the imported logs." Another major finding is that when all steps are completed, the probability of pest infestations in the U.S. is "negligible because of the mitigation measures and the sequence in which they are applied." The SEIS goes on to point out that "monitoring indicates that the regulations have successfully excluded quarantine pests from log and lumber imports." These important findings should be highlighted in a conclusion to this Section of the report, as well as in the Summary of the SEIS.

AF&PA understands that APHIS has focused most of its attention in the SEIS on the uncertainties that were of concern to the District Court. However, these uncertainties need to be put into context with the wealth of information that is available to make pest control and mitigation decisions. The effectiveness of heat treatment, as well as pest control programs in the importation of nursery stock, are good examples of abundant and conclusive information. The amount of available information and experience can then be adapted to address virtually any pest or disease scenario. Thus, the SEIS should reflect this largely satisfactory situation.

Compliance by Exporting Countries:

The thorough discussion of the wide range of programs and procedures in place to ensure compliance by exporting countries is very informative and provides the reader of the SEIS with an added level of assurance that APHIS's regulations and processes are in place to ensure compliance, both within and outside the U.S. The APHIS certification of pre-clearance programs, requirements for foreign heat treatment facilities, and U.S. port inspections further ensures that pests do not accompany wood imports. Additionally, APHIS's increased emphasis on inspection and enforcement will send the message that non-compliance will not be tolerated.

As many of the wood exporting companies are American owned or affiliated, it is not in their best interests to be in non-compliance with U.S. phytosanitary laws. Not only are their imports at risk from civil penalties and revocation of permits, but the domestic timberlands of those same companies would be at risk of pest infestation. Thus, there is a strong business incentive to ensure that all wood imports into the U.S. are conducted in strict compliance with APHIS regulations and procedures.

In addition, certain high quality products need to be pest free in order to meet the specifications of the importer and ultimately, the customer. For example, veneer quality logs and fine hardwoods used in furniture and other valuable end products must be free of any insects and diseases. Thus, the importer has an additional incentive, or economic requirement, to ensure that phytosanitary regulations are complied with, and perhaps exceeded. APHIS should recognize these situations and apply differential monitoring, inspection and regulatory scrutiny. This would allow APHIS to allocate the bulk of its resources on suspected problems.

The SEIS mentions the cooperative efforts at the international, Federal, State, and local level, but should more fully elaborate on how these programs operate. For example, many states have cooperative agreements with APHIS to provide expertise and professional assistance where and when appropriate. At the international level, APHIS works closely with various regional phytosanitary organizations to ensure the consistency and effectiveness of mitigation and control programs. The North American Plant Protection Organization (NAPPO) is one that should be explained in greater detail. Additional detailed and informative background information could be incorporated into the SEIS as Appendix material.

Because of the close business relationships between U.S. and Chilean and New Zealand forest products companies, AF&PA is aware of the very comprehensive phytosanitary programs of these countries, many going back over a century. The various laws, regulations, and other programs of these and other countries should be incorporated into the SEIS as additional Appendix material.

The enforcement record of APHIS under its Federal Quarantine Regulations as outlined on page 41 is impressive. The civil penalties involved, along with additional stipulations and orders, will go a long way in discouraging non-compliance. From a business and financial perspective, however, one of the most important tools available to APHIS is the holding up of large and valuable shipments of products. This enforcement and compliance tool should receive additional discussion in the SEIS.

A major finding of this section of the SEIS is that the wood import regulations in effect have been successful in preventing quarantined pests from entering the U.S. This major finding should be highlighted in a set of conclusions for this section and the Summary of the SEIS.

Human Health Effects of Eradication and Control:

AF&PA agrees with APHIS that it not possible or practical to repeat all of the risk assessments that have been done by other agencies addressing the human health effects of controlling a pest infestation. The general nature of the discussion and the examples provided in the SEIS is sufficient, as are the references to the multitude of assessments that have been conducted by EPA, the U.S. Forest Service, BLM, and other federal and state agencies.

AF&PA recommends, however, that additional information on the EPA FIFRA pesticide program be provided to inform the reader of the extensive regulation of pesticide registration and use that is present in the U.S. Chemicals that are registered are accompanied by a Label that has very specific application requirements that mitigate any adverse health impacts. This comprehensive pesticide regulatory program administered by EPA is the most comprehensive in the world and should be recognized as such.

The human health risk assessments for individual pesticides that have been conducted by USDA, USFS, and APHIS could also be addressed in more detail by including the major findings of those reports as Appendix material. While this information will require additional time to prepare and additional expense to include in the SEIS, it may help those unfamiliar with pesticide regulation to understand the amount of information that is available about human health risk assessments.

While new pests from foreign countries may not have been studied to the same extent as domestic pests have in the U.S., the generic management programs and plans that are in place could be adapted to address these new pests. Such updated strategies and control programs will generally not require major new research and control programs.

An important issue that should be mentioned in this section of the SEIS is the fact that appropriate and prudent use of pesticides and fungicides, particularly methyl bromide, as part of the APHIS phytosanitary regulations can actually mitigate pest infestations. Thus, limited and controlled uses of small quantities of pesticides can prevent larger pest outbreaks and the need for eradication and control programs. Clearly, limited and controlled uses of pesticides to prevent exotic pests from becoming established in domestic forests mitigates against the need to use much larger quantities to control the spread of pests, and justifies, from a public policy standpoint, the use of certain pesticides.

The SEIS needs to address the methyl bromide issue in more detail, particularly in light of recent developments with the Montreal Protocol. As noted above, all uses of methyl bromide in the U.S. are scheduled to be phased out by the year 2001 under provisions of the U.S. Clean Air Act and accompanying regulations. Conversely, the most recent international agreement through the Montreal Protocol is to exempt preshipment and quarantine uses of methyl bromide. The result is that all other countries will continue to be able to use methyl bromide for phytosanitary requirements, while the U.S. will be the only country that cannot. This has the

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15

Comparison of the Alternatives

The analysis of the alternatives and comparison of environmental risks of each is much improved and provides the reader with sufficient information to determine the relative effectiveness of the six alternatives. Table 4-6, 4-7, 4-8, and 4-9 provide a succinct outline of the key aspects of the regulations and their requirements. And, the Figure 2 Matrix of relative rankings of the alternatives allows the reader to quickly understand the relationships among the alternatives.

Another major improvement in the SEIS is focusing the analysis on the issues identified by the public and other stakeholders in previous comments on the EIS. Specifically addressing human health, forest resources, biodiversity, ozone depletion, global change, cultural resources, and threatened and endangered species and how they are impacted by the six alternatives was helpful and allows the public to evaluate the major differences between the alternatives.

APHIS should address the fact that the U.S. will not be able to use methyl bromide past the 2001 phase-out date, while the rest of the world will continue their use under the Montreal Protocol. This removes an extremely valuable tool in the battle against exotic pests and diseases that would affect the capability of the U.S. to respond, particularly in light of the lack of adequate alternatives to methyl bromide fumigation.

The role of trees and forests in the global carbon cycle is very important and the advantages of a vibrant forestry sector in sequestering and storing carbon should be emphasized in the discussion of climate change on page 65. With free and open trade in forest products, the value of trees takes on added significance. As trees gain value, there is an economic incentive to increasingly plant trees and grow them productively, thus sequestering greater quantities of increasingly available carbon. Once these trees are harvested, the forests are replanted and actively managed to again consume carbon to produce more wood fiber. This wood fiber can then go into wood products where carbon can be stored for long periods of time.

8

Thus, regulatory alternatives in the SEIS that both protect forests from insects and diseases, while not creating overly burdensome requirements, will promote reforestation and the sequestration of carbon, thus mitigating potential global climate change.

Additional Updated Information:


The discussion of APHIS's response to the GAO Report including suppression and eradication programs, insect pests, methyl bromide use, and new methods and techniques is very informative and relevant to addressing the District Court's order. Some or all of this information should be incorporated into the most relevant sections of the SEIS to help round-out the discussion and fill important information gaps identified by the District Court. As part of the analysis contained in the appropriate sections of the SEIS, it will more clearly contribute to the readers understanding of the information and how APHIS arrived at its policy decisions.

Conclusions:

AF&PA again commends APHIS for the quality and comprehensiveness of its SEIS in addressing certain procedural NEPA deficiencies. APHIS is also to be congratulated on producing the SEIS in a very professional and timely manner. We urge the agency to complete revisions and publish a final SEIS in advance of the May 15th briefing of the District Court.

AF&PA is confident that the District Court will agree that APHIS has successfully addressed the concerns with the procedural aspects of the original EIS. And based on our review of the SEIS, and the preparation of several industry case studies addressing the adequacy of the existing regulations, we believe that the APHIS regulations are sufficient to ensure that the risk of pest infestation is negligible. Given the adequacy of the procedural elements of the EIS and the effectiveness of the APHIS regulations, we believe that the District Court should lift the injunction against the issuance of new phytosanitary permits.

If APHIS has any questions about the above comments, or would like to meet to discuss any of the issues raised, please feel free to contact us at (202) 463-2456

Sincerely,

 Scott Berg, Director Forest Policy Research
 American Forest & Paper Association

cc: Richard Orr, APHIS
 AF&PA APHIS Policy Task Group

CALIFORNIANS FOR ALTERNATIVES TO TOXICS

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Post marked

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Encl., CA

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Duplicate

Feb 11, 1998

Dear Mr. Edmundson,

Please accept the enclosed copies of our comment letter to your Feb. 4 Feb. 10 for the Anticipation of Forest, etc. I corrected a few typos but did not change the meaning. You may find it slightly easier to read. The Feb. 10 letter was faxed; Mr. Orr asked us to send a hard copy. It is enclosed.

Sincerely,

William McCarty

CATS CALIFORNIANS FOR ALTERNATIVES TO TOXICS

P.O. Box 1195 (78 Sunny Brae Center) Arcata, California 95518 USA
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February 9, 1998

Mr. Jack Edmundson
Policy and Program Development
USDA/APHIS
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson,

I write for our organization, Californians for Alternatives to Toxics, and for Environmental Protection Information Center, Willits Environmental Center and Mendocino Environmental Center in regard to the Draft Supplemental Environmental Impact Statement (DSEIS) and the Rule Making (Rule) for the Importation of Logs Lumber and Other Unmanufactured Wood.

All plaintiffs, including CATs, in the lawsuit against Animal and Plant Health Inspection Service (APHIS) regarding the Environmental Impact Statement (EIS) requested an extension to the comment period for the DSEIS because its release just before the Winter holidays reduced the number of days available for study and because the issue is very broad in scope and extremely complex. APHIS refused our request. We later learned that at least two parties who participated in scoping and requested a copy of the DSEIS did not receive it. APHIS should provide them with copies of the document and extend the comment period to accommodate their right to review it.

We incorporate by reference:

all letters written to the Forest Service and APHIS by participants during the development of the Pest Risk Assessments for Siberia, New Zealand and Chile.
all comments to the draft Rule for Importation of Logs, Lumber and Other Unmanufactured Wood (Rule) submitted during its official comment period
all arguments and issues raised in all of the papers and pleadings filed in the case of ONRC v. APHIS in the United States District Court for the Northern District of California. No. C 95-0466 CW.
"Risks of Exotic Pest Introductions for Importation of Fresh Mexican Hass Avocados Into the United States," University of California, Center for Exotic Pest Research, Analysis of USDA APHIS' Proposed Rule 7 CFR Part 319, Docket No. 94-116-3. 1995. Riverside, CA.
North American Plant Protection Organization, Draft No. 1, "NAPPO Standards for Phytosanitary Measures," October 1997. Nepean, Ontario, Canada.

I. General Overview of the draft

A. One difference between the DSEIS and the original EIS written for this Rule is that the original, while almost completely lacking in external support for its conclusions, poorly assembled so that a rational line of thought cannot progress, written in unintelligible and vague language and failing to describe core issues as required under the

National Environmental Policy Act (NEPA) -- characteristics shared by the DSEIS -- the EIS did not, unlike the current DSEIS, include (to our knowledge) what appear to be outright untruths. Perhaps in the attempt to provide the information the court found was missing, APHIS was forced to reveal a glimpse of what is supporting its Rule. We would guess from that glimpse that "the Emperor has no clothes!" but there is not enough information presented to make that analysis with certainty. We CAN see that some of what is presented appears to be untrue, and together with what apparently is deliberate withholding of information, we begin to suspect the DSEIS to be, essentially, a passel of made-up rationalizations.

Quite simply, by not speaking plainly or clarifying your statements, by not describing adequately the basis for your analyses or providing external support for the conclusions you reach, by ordering the information you DO provide in an confusing format and by hiding important information, you increase our suspicion that what you're giving us is lies, lies and damned lies, and that you're concealing what you are actually doing from the American public.

B. Many passages in the SEIS are unnecessary because they do not convey information directly related to the issue, expound way beyond what is required or are not written to convey information in plain language that can be understood.

C. The meaning of several important terms are not adequately described in the glossary nor in the text, such as "kiln drying," "manufactured" or "unmanufactured wood;" we request you add such descriptions to the SEIS. Without adequate definitions it is impossible to determine if some wood articles not included in the regulation should be. The description should be clear enough to, for example, know if and why wood in a chair is considered "manufactured" even if it has gone through no processes other than air-drying, cutting and sanding. How did APHIS chose certain wood articles to be covered by the regulation and why, and why not others?

Introduction: A. Background

From the start, your failure to include important information adversely affects our understanding of the proposal as it is presented through the various sections of the document.

In describing the need for the Rule (p1, paragraph 1), you fail to fully describe the reduction in future U.S. tree harvests due to the present and future loss of trees to imported pests.

What will be, for example, current and potential reductions due to damage caused by the pine shoot beetle? USDA has analyzed these in the development of quarantines. There are a number of other imported pests which are causing reduction of tree harvests and will continue to do so, and there will be losses due to pests that enter on unmanufactured wood. Please provide a substantiated summary of the scope of future tree harvest reductions, including those due to imported pests, and projected domestic wood requirements. Provide your analysis of the probable range of various types, and origins of, imported wood that can be reasonably anticipated, include wood packing material. The information is available and should be clearly described so decision makers and the public will have an adequate understanding of the need for the rule making and the scope and complexity required in the SEIS. What you provide is inadequate to the task

You state (p1, paragraph 2) that "Recent trade agreements, such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), have opened up trade by removing barriers (other than phytosanitary barriers), which directly affect APHIS' inspection activities."

Please describe, using clear language, what you mean by this statement since it is critical that we know how APHIS' inspection duties have been affected by the trade treaties it, as you imply, the changes have a direct bearing on how the Rule is structured.

Our concerns are based on information we obtained outside the DSEIS or other documents prepared in this NEPA process and are readily available to APHIS. For example, in a presentation on August 14, 1995, APHIS' Deputy Administrator Husnik said,

"There are significant differences of opinion about whether GATT and NAFTA changed the rules of the game...has the game itself changed i.e., moving from a science based protection program to a trade facilitation game."

"There are also differences of opinion concerning the implications of this change to the basic APHIS mission. If our core mission is to protect U.S. agriculture, **then the new trade environment increases risk to U.S. agriculture by increasing the volume of trade and raising the level of risk tolerance.** [our emphasis]

"Another view, however, is that the basic mission of APHIS now emphasizes enhancing marketability of U.S. agriculture."

"The goal, according to this paradigm, is to promote a level playing field where facilitation of imports assures greater movement of U.S. exports."

"In essence what we are doing is setting a strategic direction towards a more balanced regulatory approach to traditional protection activities. We are moving

From Toward

Protectionist	Trade focused
Risk averse (zero or minimal)	Managed risk (risk and benefits)
Rule based decisions	Standards based decisions
Export focused	Import and export focused
National bias	Global bias"

"How fast we move and how far we go towards trade facilitation has yet to be determined."

Please describe which paradigm is now the official position of APHIS. Does it weaken or otherwise influence the Rule in comparison to APHIS' protocols written before the mid-1990's? Has APHIS begun a new program which involves encouraging imports?

As the Center for Exotic Pest Research at the University of California states in its analysis of APHIS' proposed (now final) rule for the importation of fresh Mexican Hass avocados (7 CFR Part 319, Docket #94-116-3), "...asking APHIS to also facilitate import trade is a total conflict of interest and a clear departure from their historical mission." And, we would add, a clear departure from the role mandated by the Plant Pest Act

You state (p1 paragraph 3) that because the U.S. did not import appreciable quantities of logs and lumber (except from Canada), you did not have a rule for logs, lumber, and other unmanufactured wood. To clarify the dangers of shipping material as a motivation for writing this Rule, we request that you describe to what degree the amount of wood used for shipping has increased in the last few years as world trade has escalated, and how damage and packing materials have been the vehicle for several recent important pest introductions. You lump damage and packing materials with the "other unmanufactured wood articles" and fail to adequately describe the critical importance of these wood articles while you focus on log imports, thus further obfuscating the issues.

We have learned outside this NEPA proceeding that the import rule for dunnage and packing materials from outside North America WILL SOON CHANGE. Under the proposal now in effect, dunnage and packing materials currently enter the United States with NO mitigation required other than being subject to inspection at the port of entry if it is 1) free of bark and 2) with non-regulated [i.e. not other unmanufactured wood] materials.

The change to the Rule will be imposed by changes to phytosanitary standards now being formed by the North American Plant Protection Organization (NAPPO), which is recognized within NAFTA as responsible for the development of North American phytosanitary standards. On October 9, 1997, more than two months before the release of this DSEIS, NAPPO issued its "Draft No. 1" for "Import Requirements for Wooden Dunnage and Packing Materials from Sources Outside of North America."

The new standard "states the conditions of entry for all wooden dunnage and packing materials entering North America from non North American sources."

Specifically, NAPPO/NAFTA will require that "All shipments must contain only wooden dunnage and packing materials which have been commercially kiln dried so that its moisture content is less than 20 percent...OR...other treatments or processes...endorsed by the plant quarantine authorities of Canada, Mexico and the United States, i.e., wood that has been pressure treated with an approved chemical preservative."

You could hardly have been unaware of this proposed change: NAPPO's Executive Committee, which will officially accept the proposed standard, has as one of its three members Mr. Alfred Elder of APHIS, and you reference two NAPPO documents relating to irradiation in the SEIS. NAPPO's plan to require stricter phytosanitary standards than those in the Rule will cause APHIS to amend the Rule. We request that this important new information be included in the SEIS. Please describe sharply how APHIS plans to accommodate NAPPO's standards. What will the changes to the Rule entail?

You state (p4 paragraph 2) that the "...sole [Webster's Dictionary "the only one; one and no more; one and only"] function" of the regulation is "...to protect U.S. natural resources from the potentially devastating effects of introduced plant pests." Yet next you say the "...regulations are structured to allow importers a degree of flexibility in their approach," and "this strategy results in import restrictions that obstruct trade as little as possible." These are contradictory and confusing statements. Do you mean that to "obstruct trade as little as possible" is APHIS' purpose and thus its function? Is it that protecting U.S. natural resources and obstructing trade as little as possible are actually APHIS' dual functions? These statements are confusing and lack clarification, we request that you describe your meaning clearly. We note that here, while you are still trying to introduce the proposal, your initial failure to describe the impact of GATT and NAFTA on your inspection duties flows out to muddy this statement, and will continue to do so throughout the DSEIS.

Also missing from the introduction and the remainder of the DSEIS is any mention of the Pest Risk Assessment (PRA) for Mexico, the draft of which was reviewed by various experts one year ago. At what stage of progress is it? Since it obviously must contain important new information related to the Rule and the NEPA proceeding, why don't you describe it in the DSEIS? What changes will occur to the Rule as a result of the Mexican PRA? Your failure to include information about the Mexican PRA and subsequent planned changes to the rule make it impossible to adequately review the alternatives, the mitigations and the effects described later in the DSEIS because the information presented is incomplete; it does not describe conditions relating to current imports of unmanufactured wood from non adjacent states of Mexico or planned changes or additions to the Rule. We request that you describe current and anticipated imports of raw lumber from Mexico and compare the size of the

shipments to log and lumber imports currently underway and anticipated from other sources.

B. Historical Perspective

We request that you provide information about the economic losses attributed to the pests you describe in this section. This information is available and would enable us to better understand the scope and complexity of the proposal.

Your description of the Asian gypsy moth (p 5 paragraph 5) is inaccurate. It may have been eradicated in the Northwest in 1992, but it has been found each year since at the port, and in 1996 was found in traps in neighborhoods of Seattle where insecticide spraying by helicopter was immediately undertaken.

C. Relationship to the Environmental Impact Statement

We request that you print the letters submitted for the DSEIS in the FSEIS (p 7, paragraph 1) as you did in the FEIS so that all interested members of the public will have a better understanding of changes made in the final document. If you do not do this, each interested party will be required to purchase copies from APHIS in order to view the comments

F. Summary of the Economic Analysis

Here you present a few figures, but so much data is left out that it is impossible to put the analysis in perspective and understand it. You say, for example (p10, paragraph 5), that 78.6 percent of the total estimated consumer welfare loss is attributable to treatment costs for damage, but you fail to provide a basis for this figure, which could be accomplished in a few words describing how much damage is imported, what percent has bark on it and what this is in comparison to other treatments for other materials. You must have the basic information you used for the analysis; we request you summarize it rather than presenting these random-seeming figures that do not make clear your economic analysis.

II. Purpose and Need

(p 13, paragraph 1) You fail to describe your powers under the Plant Protection Act and Plant Quarantine Act sufficiently; one cannot read from this that you can ban the import of materials for which you have a serious concern for the likelihood of pest introduction, such as your ban on wood articles from Siberia until you began to operate under the Rule, and for other commodities such as beef from Belgium, which was banned this summer due to one case of mad cow disease in a bovine in that country. The actual scope of your powers needs to be described adequately.

Your last statement in this section (p14, paragraph 1) that the DSEIS provides additional important information and a better comparison of the alternatives may be true to a limited degree, but the document falls far short of providing important information or an adequate comparison of the alternatives.

IV. Environmental Analysis

3. Human Health Effects of Eradication and Control Efforts

(p 43, paragraph 3) In listing factors that may influence the impact or extent of effect to human health from control efforts you fail to mention the economic and/or environmental importance of the introduced pest, which can have a direct bearing on whether a program is initiated, how great an emergency it is considered to be and by how much economic or environmental impacts of the pest will outweigh the importance of human health effects and other factors. In fact, not describing how each of the factors will influence the effect on human health it is an

important omission: merely listing these factors doesn't satisfy the NEPA requirement, and we request that you provide a description of each factor.

You say (p 43, paragraph 4) that since it "would be impossible to predict the specific programs and treatments that APHIS may implement, this discussion must be of a general nature." This is most ingenious; APHIS is obligated to summarize all sorts of exotic pest control programs in which the Agency has participated and is obliged to summarize its findings and those of scientific research to present an analysis of the risk involved. You list risk assessment examples on pages 47, 48, and 49, but you do not give a cohesive or relevant analysis of any you list or apply them to the question at hand: what are the human health implications of pest eradication or control as a consequence of pest introduction? Of course it is extremely impossible to "predict precise impacts to human health;" that is why risk analysis, itself an imperfect science, was invented, so the public and decision makers could be informed when and where there is significant possibility of health impacts as a result of the introduction of an exotic pest as a result of wood imports.

As an example of the seriousness with which the U.S. Environmental Protection Agency takes the possibility of pesticide use for this purpose, we refer you to the letter of R. Sanderson of the EPA in comments to the EIS, April 29, 1994, "EPA concurs that the inadvertent introduction of pest species may ultimately carry extremely high cost by either causing the outright destruction of U.S. forest resources, or by stimulation the use of pesticides, possibly in significant amounts, to combat the introduced pest." [our emphasis] We request that you also take seriously potential pesticide impacts by providing a risk assessment as a supplement to this document.

You fail to discuss the potential of impacts to workers, for example, and merely gloss over impacts to urban dwellers. We request information about potential exposure scenarios such as when workers are handling, including sawing, wood that has been treated with pesticide for mitigation requirements, and may additionally or instead be exposed if pests are found at a port, mill or transport facility or corridor and the area must be treated with pesticides. Other workers that could be exposed are those who would apply pesticides during an eradication/control program.

By the same token, potential of exposure of other human populations, such as urban populations, must be described and analyzed. In California we are all too familiar with urban aerial sprayings of malathion for Medfly control in which hundreds of thousands of people were in a position to be exposed to the pesticide. In another situation, CAT's organized a successful legal challenge in state courts against backyard spraying in mainly rural areas of an organophosphate on apple trees in an attempt to eradicate the apple maggot fruit fly. Especially vulnerable to efforts to eradicate a pest before it becomes established are port towns such as Eureka, which is on the Humboldt Bay, as is our office and the homes, workplaces and schools of many of our members. The situation in Seattle, where neighborhoods were sprayed to stop the Asian gypsy moth, is a recent example of suburban spraying.

Although you cite risk assessments for a number of pesticides which may be used in a program, most of the risk assessments are old, written up to eleven years ago. Significant new scientific information has become available about the adverse effects of all of these pesticides since the risk assessments were published.

For example, you cite the risk assessment for malathion prepared for APHIS' Medfly eradication in 1995, but there have been new discoveries about the toxicology of malathion since that date. For example, in *CANCER RESEARCH*, 56, 2393-2399, May 15, 1996, "DNA molecule damaged by malathion." A 1996 study which found that in experiments of human white blood cells that malathion was causing "deletions" in one section of the chromosome. In conclusion the scientists stated, "This work provides the first evidence of an association between malathion exposure and specific mutations in human T lymphocytes."

You cite a chlorpyrifos risk assessment for Forest Service nursery management for 1993 (p48, paragraph 1994). The use of chlorpyrifos in the nursery environment, though it may provide some information regarding

worker exposures, does not provide information about exposures to other human populations, such as those in cities or with trees in their backyards.

There is also new scientific information about chlorpyrifos that may have a significant effect on the conclusions if a risk assessment was done in 1998. For example, on January 15, 1997, EPA Assistant Administrator Lynn Goldman sent a letter about chlorpyrifos to Dow Elanco's president and CEO in which she stated that "EPA believes that it is important to strengthen the protections via changes in the registrations and labeling for this pesticide to prevent potentially harmful exposures." (from Pannups, Pesticide Action Network, 1/97) On January 14, 1997, EPA released "Review of Chlorpyrifos Poisoning Data," a report on chlorpyrifos poisoning incidents in the U.S. Albert Donnay, of MCS Referral and Resources, also recently studied chlorpyrifos poisoning incidents. In a presentation at the American Public Health Association's 1996 annual meeting, Donnay stated that most of the poisoning cases he examined involved routine exposures in which chlorpyrifos was used as directed. The most common symptoms included chronic headaches, nausea, vomiting, breathing difficulties, neuromuscular pains and multiple chemical sensitivity. An additional study presented at the same meeting documented eight cases of serious birth defects seen in children whose mothers were exposed to chlorpyrifos during the first three months of pregnancy.

This information and other new scientific information about all the pesticides that may be used to eradicate or control exotic pests should be analyzed in a risk assessment.

e. Pest Characteristics that Potentially Affect Human Health

This section (p 50 -51) should be renamed "Location Characteristics" because it does not describe pest characteristics at all. It does not give an adequate description of locations of pest invasions either.

h. Cultural Resources

This section completely overlooks the impact on cultural resources of Native Americans. Several Native Americans are members of our organizations; two Yurok Tribe and California Indian Basketweavers members are members of CAT's board of directors (and our organization is a member of CIBA). The loss of forest resources has profound effect on the ability of Native Americans to practice their cultural activities. The Yuroks and other tribes in Northwestern California and Oregon use the yew, incense cedar, Douglas fir and other wood in their cultural practices. The potential impact on these cultural activities cannot be overlooked by you and must be discussed adequately in the SEIS.

Your comment on page 42 that the regulations have successfully prevented quarantined pests from entering the United States appears to be a fabrication. We found the following notice on the internet:

Date: Wed Jun 25 16:10:28 PDT 1997

From: Margie Napier <la348wcasupl>

Phone: +1 916 551 3220

Subject: PLEASE POST TO PPO BULLETIN BOARD

The California Department of Food and Agriculture (CDFA) has notified the California Plant Health Director's Office about finding one adult beetle identified by CDFA as *Anoplophora* sp. (suspect Asian Longhorn Beetle) in wood crates.

San Luis Obispo County Agriculture Inspectors found the beetle after being notified by an automotive repair shop about the beetle crawling out of a wood crate. The crate was associated with machinery (Foot Shear 52") from

7

China CDFA traced the equipment to a warehouse in Oxnard, CA owned by Harbor Freight Tools

The crates were fumigated

Harbor Freight Tools sent the same equipment to eight other states: NJ, PA, IL, MO, MI, WI, CO and NM. I have notified the Plant Health Director of each state. The shipping line was Hanjin Shipping Co. Ltd. and we believe the equipment was manifested as tools. The shipper was SHANDONG Machinery & Equipment, Import and Export Group, Corporation 9 Fu Zhou Road, Qingdao, China. T

We are trying to get the beetle further identified to species

Larry Prinzbach, State Operations Support Officer Sacramento, CA

Date: Fri Sep 19 1997

From: Port Operations Ppq

Phone: +1 301 734 8295 Fax-Phone: +1 301 734 5786

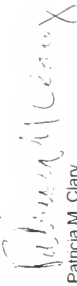
Subject: Asian longhorn beetle

Subject: Cargo Inspection for Asian Longhorn Beetle

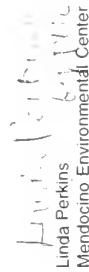
Further, in conversations with state plant pest quarantine in several East Coast states, I have been informed anecdotally that APHIS has intercepted actionable pests in at least one port of entry. You do not provide any of that information, which is essential to the integrity of your statements. Please provide information about every quarantined wood pest that has entered the United States since the Rule has been in effect.

The remainder of my comments will be faxed to your office on February 10, 1998.

Sincerely,



Patricia M. Clary
Executive Director



Linda Perkins
Mendocino Environmental Center

8

CATs CALIFORNIANS FOR ALTERNATIVES TO TOXICS

P.O. Box 1195 (78 Sunny Brac Center) Arcata, California 95518 USA
(707)822-8497/-7136 fax cats@kic.org <http://www.mapcruzin.com/cats>

February 10, 1998

Mr. Jack Edmundson

Policy and Program Development

USDA/APHIS

4700 River Road, Unit 149

Riverdale, MC 20737-1238

Dear Mr. Edmundson,

This is the second part of our comment letter for the Draft Supplemental Environmental Impact statement (DSEIS) and the Rule (Rule) for the Importation of Logs, Lumber and Other and Unmanufactured Wood. Please consider both letters as one, endorsed and signed by representatives of Californians for Alternatives to Toxics, Environmental Protection Information Center, Mendocino Environmental Center and Willis Environmental Center.

In general, we are disappointed with this draft of the SEIS. The proposal it addresses, the regulation of imported unmanufactured wood articles, is extremely complex. The origin of wood is from everything from freezing Siberia to lush and tropical Central America and far-away forests and plantations in Africa and Southeast Asia. The wood itself is from hundreds of species which, when debarked, rough-cut into lumber, chipped or shaped for shipment packaging is very difficult to identify.

Some nations that are currently importing significant amounts of unmanufactured wood are extremely biodiverse, such as Mexico which currently imports rough pine lumber for resawing in Oregon and which supports over 40 pine species. Mexico also is home to over 400 bark beetles, most of which vector a fungus, many of those fungi are harmful to trees, including a number capable of attacking and destroying healthy trees.

A. Efficacy of Combinations of Methods

In Potential Future Imports (p20-21), you fail to mention imports from Mexico and from shipping materials, we request that these be included.

You presented incomplete information about the source for for Table 4-3 (p25), Orr, 1992. Your reference lists this as being found in the Administrative Record at 8685 - 8695, which is not readily available to most of the public. However, it is available to CATs and we have read it. It is actually a draft titled "Plant Protection and Quarantine requirements for the importation of Pinus Radiata and Douglas-fir logs, lumber and wood chips from New Zealand."

This reference, which is cited "Orr, 1992" (p25), is reportedly the product of the USDA-APHIS Log Mitigation Committee, all APHIS personnel, who relied on the Pest Risk Assessment for certain New

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Zealand species. But as other commentators to the DSEIS point out, it is a big stretch even from the Risk Assessment, which was criticized by reviewers for its incompleteness, to table 4-3 in the DSEIS. The report card on page 4 of the cited document is not supported any better than it is in the DSEIS Risk Assessment and Control Measures (p28-31)

Our critique of your description of the uncertainties of the Pest Risk Assessments (PRA) is that you do not describe the uncertainties that were pointed out to you by the expert reviewers of those documents during their formation. We have incorporated their comment letters in regard to the three published PRAs by reference in our letter of 2/9/98. The uncertainties were spelled out quite plainly, but you have chosen to instead babble about risks in an overly narrow and limited matter that makes its understanding impossible.

The information noted above about wood imports and pests of Mexico is available in the draft PRA for wood articles from Mexico prepared by the United States Forest Service. The document is not available to the public, although CATs has seen it; it is considered an internal document by the USFS. Thus, although few members of the public outside of interested industry have seen it, it is not available to reviewers of the DSEIS and not discussed, nor are the changes to the Rule planned, in the near future, to accommodate its "findings" ever mentioned. When do you plan to release a final PRA for Mexican wood, what do you plan to do to change the Rule as a result, and why didn't you mention this important document in the DSEIS?

We are concerned that the Pest Risk Assessment process is too closed to public input. Of course we understand that the importing industry is intimately involved in the process, but they obviously do not compose even the majority of the interested public. Will PRAs be available in draft form for the public to critique? Or will APHIS simply release one at the time of the regulatory change that will come about as a result of the PRA?

Further, in regard to PRAs, we do not see any discussion of why PRAs for shipping material from various countries have not been proposed. This often completely untreated wood (except for debarking) is being spread across the United States in cargo shipments. In our comment letter of February 9, 1998, we included an internet posting from the California Department of Food and Agriculture that states that damage from China contained a probable Asian long-horned beetle which was discovered in an automobile repair shop in San Luis Obispo County, California. It was part of a shipment of machinery and damage also sent to New Jersey, Pennsylvania, Illinois, Wisconsin, Colorado, New Mexico, Missouri and Michigan.

A list of importers of this type of damage from China was also posted. This information was posted on the National Agricultural Pest Information System (NAPIS) web page at <http://www.ceris.purdue.edu/napis/states/or/psb/orpsb.html> (Of course you would know where to find it since it is funded by APHIS):

This is a reminder. Please reference E-mail message posted on PPQ bulletin board on July 18, 1997. If quarantine significant pests are found in wood packing material from China, fax a copy of the completed Emergency Action Order to Program Support

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at (301) 734-5786, Att. David Reeves. Please insure the shipper's name and address is as complete as possible. The following shippers have had quarantine significant pests found in wood packing material from China. The list below is taken from PPQ 523's forwarded from Longbeach, Ca..

Sinotrans Beijing Sea Freight Co. Chang Yang district Beijing, China
 Shan Dong Machinery Intercorp #1 Qungda, China
 Jiangsu Light Industry Product Shanghai, China
 Mantraco LTD Shanghai Shenjing Int. Room 1321 Fazhan Shanghai (?) China
 SFTBC Shanghai
 Alexandave Industries Co. P.O. Box 52, Lin Kou Taipei Hsien Taiwan
 Hubei Foreign Economic Relations & Trade Industrial Corp Wuban, China
 China Shaanxi Machinery Import & Export Corp. 125 Friendship Road Xuan, China
 Kenwa Shipping 57017 Hsinking Xingang, China (No Address on PPQ 523)
 Shanxi Machinery and Equipment Import and Export Corp. Jiangsu Machinery Import

The purpose of printing this message is to underscore our concern that almost completely untreated imported wood is spread throughout the United States without a PRA done to determine if more stringent standards need to be imposed or if the wood from that country needs to be banned outright due to the serious risk associated with it. We request that APHIS conduct separate PRAs for wood damage and shipping materials for each country of origin.

We request that the origin and species of dunnage and shipping materials which are currently being imported are described in the SEIS as well as the amounts of these materials and their final destinations in the U.S. We request that this description define and quantify what is known and unknown about special pest risks of: a) wood articles from native forests versus those from plantations; b) tree species native to the U.S. but grown elsewhere; c) temperate species plantation grown in the tropics. Only with this information described, together with information about kinds of potential or actual quarantined pests found in association with wood imports, can the public and decisionmakers decide whether your decision to not include dunnage and shipping materials or to define the various points of origin and species of any wood articles (native or plantation origin, U.S. native species, temperate species in tropical origin) in the protocol for PRAs was an adequate exercise of your duty.

To return to the Human Health Effects of Eradication and Control Efforts section, which we critiqued in part in our letter of 2/9/98, you have inaccurately portrayed the potential for human health impacts following a plant pest introduction in the two examples you present (p44-45). For example, you say (p44, paragraph 4) that, in relation to the infestation of the Asian long-horned beetle, that "pesticide applications generally are not a part of the program. Therefore, the potential impacts to human health from control efforts would result more from incidents occurring during the mechanical removal and destruction of the trees." What you do not say is that because the Asian long-horned beetle is such a serious pest

that research for means to eradicate or control it, including with insecticides, are still underway. In fact, according to an article in the March 1997 issue of "The Forestry Source" magazine, the Forest Insect Unit of the USDA Forest Service, along with state, federal and university investigators, will be testing various insecticides as one of the approaches to controlling the pest.

In fact, your mention of the Asian long-horned beetle in the health section is strange. Why don't you discuss this pest earlier in the efficacy of mitigation and comparison of the alternatives sections? Or in the PRA section? Was it because discussing this pest, which arrived from China -- for which there is no pest risk assessment -- and on dunnage -- for which you may be soon altering the rule -- and which is a new and very frightening pest -- for which you have very little information about what the future control measures might entail -- made the subject too uncomfortable for APHIS? Please describe how other pests of which you have a longer history and time to analyze the effects, and which have been treated with pesticides, and describe how, in these better known situations research has shown the eradication to have or have not an impact on human health.

You raise an interesting new subject at page 52 (paragraph 1). You say it is not feasible to control wood-boring insects with pesticides and that trees would be removed and destroyed by clipping or burning, rather than sprayed with insecticides; please point to proof that this is so. But nowhere in any description of health or environmental effects of this Rule do you describe the effects of tree removal, chipping and/or incineration! Surely tree removal and incineration, especially over a wide area, would have a significant effect on human health and the environment. Please include a description and analysis of these effects in the final SEIS.

Overall, you do not discuss human health effects at all in this section. Just pouring text and lists onto paper doesn't make a discussion. Although you say the court agreed with APHIS that a detailed discussion of the human health consequences of eradication efforts can only be conducted in the context of a particular program (p 17, paragraph 2), the court did want a discussion that informs to the level of significance of this issue. Since the EPA points out, as quoted in our letter of 2/9/98, that damage to forest resources AND damage due to pesticide use are the TWO main significant effects of pest introduction, this section of the SEIS deserves an informative discussion; it did not get an informative treatment; we request that you return to and actually discuss the human health effects of pest eradication/control in the SEIS.

Comparison of the Alternatives (p52-68)

Although it would seem that more pages devoted to this subject would mean more information is offered, the reverse is true. Because you have left out so much important information, some of it new, out of the SEIS, as we and other commentators have pointed out, it is impossible for the public, experts or decisionmakers to comprehend what the very real differences of the alternatives.

Since you do not describe fully what your powers for banning certain commodities actually is, you fail to inform in regard to Alternative 1.

Since you do not discuss new pest introductions since the protocol for Alternative 2 has been in effect, you do not provide enough information regarding this preferred alternative. You do not at any point discuss how Alternative 2 allows the import of debarked but otherwise completely untreated wood

from any forest in the world, and that such imports are now occurring legally from Mexican native forests. Nor do you discuss the differences in your comparisons of this alternative and any other of the degree of danger between a native forest and a tree plantation, and do not present an Alternative that takes note of these differences by requiring that these differences be spelled out, Alternative 2 cannot be analyzed and understood in the right context.

Since you do not discuss imminent new regulation for dunnage and other packing materials, you fail to inform regarding Alternatives 2,3 and 5.

And since you fail to submit all important and relevant alternatives, the entire section fails to inform. Please provide all relevant information as we and other commentators have pointed out and remake this entire section for inclusion of all significant issues and all relevant potential alternatives in the SEIS. Anything less renders the document *pro forma*.

Because there was no comparative analysis in the EIS of the alternatives, it was impossible for reviewers to analyze the need for other alternatives. Although there still is not adequate information in the SEIS for comparison, new information found outside the NEPA process, and not presented in this SEIS, leads us to believe that you failed when you did not include other alternatives.

One would allow the import of only heat-treated wood articles, except for certain materials, in particular those from adjacent states of Canada, particular tropical hardwoods, bamboo and certain others. Heat treated articles would be protected from reinfestation.

Another alternative would allow the import of certain kiln-dried materials, others that were heat-treated only, or not subject to either and post-treatment protection as per the alternative option we discuss above.

We request that you present more and better alternatives, as mentioned above, and not limited by our suggested options, only by the alternatives relevance and importance.

3. Individual Ranking of Environmental Consequences of Alternatives

We are especially struck by what appears to be a contradiction on page 61 (paragraph 2), where you say that "Pest eradication measures rarely have been effective either in reversing the damage caused by the establishment of an exotic forest pest or in eradication an established exotic forest pest," when you had said at page 52 (paragraph 2) that, "...APHIS is fairly well-equipped to prevent and handle plant pest introductions should they occur." Either you are rarely effective or you can handle the introductions that occur, you can't have it both ways. Which statement is true?

Most confusing and fraught with mistakes is the graph you set up on page 60, which is followed by several pages of supposedly descriptive text. First, not enough alternatives are provided (see above).

Second, the Sources of Uncertainty should have their own graph and description, since nowhere in the DSEIS are they described; a mere listing on page 61 does not inform. We request an adequate description of uncertainties.

Third, the environmental effects are listed in a confusing manner, and are not complete. For example, human health has two heads at least: workers and the general public; workers are affected by mitigation procedures and eradication/control programs; for programs in quite different ways, such as pesticides would be used near them, or they would be applicators. Domestic and foreign biodiversity

should also be treated as two separate consequences. Ozone (MB use) is an effect of mitigation but is placed out of order with effects of eradication/control; the effects should be split into two sections: effects of mitigation measures, effects of eradication/control programs.

The information you left out of the DSEIS, as discussed previously, makes it impossible to rank the alternatives you do provide. For example, how can Alternatives 1, 2, 3 and 5 be ranked when we do not know if the Rule will soon be changed? Are you waiting to be finished with the current court proceedings to present your new amendments, since doing it now would completely invalidate these rankings?

You do not describe how you arrived at these rankings in a systematic style or by using external support (external to the team that wrote this, and scientific, and peer reviewed). Under Human Health (p63, paragraph 1), for example, you say that "Ability to Exclude Pests" was assumed to be directly correlated with the need to initiate pest control programs." Does that mean that there would be less reason to use pesticides? Would you please say that if that's what you mean so we wouldn't be forced to make a reach, as we are forced to continually in this document.

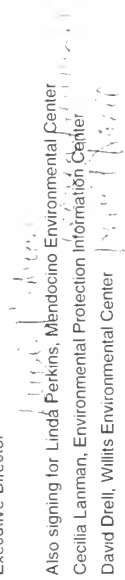
Under Global Climate Change (p65 paragraph 4), you imply that deforestation of forests would cause greater impacts to climate change than cutting of plantations without mentioning why. We are again forced to make a leap and hope we are right. You don't explain in almost every case why you state what you state; it's as if you never finish a sentence and we are left dangling along with your thought.

Cultural Resources (p65 paragraph 5) is most insulting to our Native American members, including two who belong to CATs board of directors who practice the ancient cultural activities of their tribes, which doesn't deserve mention or rating according to this DSEIS. We request that you repair this deficiency immediately.

In summary, we are deeply disappointed by the lack of information in this DSEIS. Please go back and give it a much better try. We would rather you told the judge on May 17, 1998 that you were adjusting the document because of the outstandingly helpful comments the experts and public submitted and you need a bit more time to finish rather than to have you come to court with a final SEIS that is as poor as this draft.

Sincerely,


Patricia M. Clary
Executive Director


Also signing for Linda Perkins, Mendocino Environmental Center
Cecilia Lanman, Environmental Protection Information Center
David Drell, Willits Environmental Center



Fields W. Cobb, Jr.
4429 Lakeshore Dr.
Sagle, ID 83860-8721
Phone (208) 265-1513

February 7, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis & Document
Policy & Program Development
APHIS, U.S. Dept. of Agriculture
4700 River Rd. Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

I hereby submit my comments on the draft supplement to the 1994 EIS on Importation of logs and other unmanufactured wood articles. by this time, you may know that I am quite concerned about the acceleration of log imports and the many pests that can be brought into the U.S. via these logs and other inadequately treated and poorly handled wood products. Part of this concern is the result of a fine training (and hopefully education) as well as forty years' experience as a teacher of forest pathology, as a scientist in the fields of forest pathology and ecology and as an observer and thinker in these fields. Another part of the concern is derived from my early life experience observing the near total destruction of the American chestnut and the succeeding erosion of the ecosystem that had been occupied by that wonderful species. A third part is as a citizen and taxpayer watching another governmental agency that appears to be caught up in an ugly political system that has negated the charge for which it was formed. There are numerous examples that could be used to illustrate this point, but I will direct your attention to the references to GATT and NAFTA. My question is: Is the political pressure to succeed with GATT and NAFTA so great that the protection of our forest and agricultural resources is taking a back seat, or is APHIS using these agreements as a "smoke Screen" for not acting more strongly?

As for the supplement, it appears to acknowledge some of the issues that have been presented to APHIS, but there is very little more solid documentation (or no more) than was included in the original EIS of 1994. It does not adequately address most of the questions brought forth in the public responses. But it does acknowledge

the presence of uncertainty - lots of uncertainty.

When there is as much uncertainty, as in this case, much caution is required. The authors of the supplement claim that caution was used. I suppose that this is a matter of judgment. I must frankly state that I believe it to be flawed judgment. I cannot discern whether the problem lies with an unstated agenda or the lack of a clear understanding of the risks and the magnitude of the resources at stake.

I have seen the letter by Dr. David Wood which responds to the Supplement. Until we can remove most of the uncertainties, I too believe that APHIS should require either of the two heat treatments at the point of origin in the case of all unmanufactured wood articles from all sources outside the U.S. except Canada. One exception possibly could be chips and similar products that can be thoroughly and safely fumigated. However, I have great concern about use of methyl bromide and will not support an extension of its use by EPA.

Meanwhile, I do not believe that the Supplement fulfills the order by the Federal Court, and I welcome the opportunity to participants in an effort to protect all of our forest resources.

Sincerely yours, *Fields W Cobb*
Fields W. Cobb
Professor Emeritus of Forest Pathology (by FHC)
University of California, Berkeley

cc: Vice President Al Gore

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Specific comments on Draft Supplement

Page 19: The word negligible is defined in Webster's Dictionary as "so small or unimportant or of so little consequence as to warrant little or no attention." I am certain that the use of this word as presented by APHIS is not appropriate, nor defensible. It (the word) is used here to imply that the risks and potential losses are reduced to an inconsequential level by the existing regulations. Yet, APHIS has and cannot produce a simple, scientifically derived fact to support the implication. On this basis alone, this supplement and the 1994 EIS should be summarily rejected.

The example used, "wood can be grown in plantations where sivilcultural techniques and pesticides can be used to increase harvest and reduce pest infestation", clearly shows the naively (ie. "deficient in worldly wisdom or informed judgment) of the authors of this supplement. It continues to appear that the objective of APHIS is to get something through the NEPA process, not to address the issues involved in protection of the plant and animal resources of the U.S. With respect to the APHIS statement, as a forest pathologist with over 40 years of worldly experience/wisdom, I believe that I can point to more examples of increased pest activity in plantations than of reductions. As for pesticides in plantations, there is no way that we can economically produce wood if we must invest enough in pesticides to reduce pest populations to a negligible level or any reasonable level to impact upon the pest introduction issue. Further, I have seen nothing in the supplement on the regulations which limits imports to plantation grown trees or even considers the issue.

I have experienced the effectiveness of importing "saw quality logs" into the ports of California. The APHIS inspectors had not discerned any pests on those shipments. Yet, they contained nematodes, larvae of flies and beetles, staining fungi, canker-causing fungi, and only "the Lord knows what else". Also, I suspect that the APHIS regulation has no impact on the exporters in the first place. Considering the costs of transport, an exporter is going to be stupid to include a noticeably defective log.

APHIS states that a set of procedures and treatments--must be effective, practical, and economically feasible. The implication is that the logs must come in, so APHIS must rationalize a set of P's & T's that might meet the 3 criteria. I firmly believe that when the potential losses of a pest introduction are properly evaluated, the cost/benefit analysis will irrefutably show that costs (potential) far outweigh the benefits (also potential). Take, for example, the introduction of one forest tree pathogen, the chestnut blight fungus. We can begin with the most direct loss--that of existing tress- which can be estimated at one trillion dollars. Then add the impacts on wildlife habitat, watershed protection, other plant species, human communities, aesthetics and other values. Then factor in the fact that, for all practical purposes, we have lost that species, the magnificent American chestnut, possibly forever. The potential for a repeat of this kind of disaster with another plant species is real. Yet, APHIS has chosen to completely ignore it. This is clearly an error in judgment and may border on criminal negligence. The latter is especially true when one considers how many times this fact has been presented to, or in the presence of, APHIS personnel

Pages 22,23,24:

As you must know, I firmly believe that the so-called risk assessment system that APHIS has formulated, apparently without support from the National Research Council (NAS), is seriously flawed especially when applied to forest pests. I have been fairly extensive in my comments regarding the weaknesses and hence dangers of the assessments. APHIS has admitted a degree of uncertainty and then claims that it "can be reduced to a negligible (my emphasis) level" by a preponderance of evidence and similar organisms. It is not acceptable to simply state "a preponderance of evidence". What evidence was used?

Where are the references to such evidence?

Was that evidence ever presented so that a panel of peers other than the hand picked team could evaluate it?

In describing the 4 components of the first task of the risk assessment, the supplement again did not indicate how APHIS proposes to handle the as yet undiscovered pests in the forests throughout the world. One can use numerous examples to illustrate the point that there are potentially many such organisms,

especially pathogens, in natural plant communities, eg., forest. For example, we had no knowledge of the existence of the chestnut blight fungus before it was established in the U.S., or of the Port Orford-cedar root disease fungus, or of the dogwood anthracnose fungus. Quite possibly, the greatest threat to our forest communities lie among the unknown.

The assumption that the behavior of "similar" organisms can be used to predict the behavior of a specific organism when introduced into the U.S. or the effectiveness of certain treatments is not acceptable when the potential losses are so overwhelmingly large. As a professional forest pathologist who has taught many students, done a large amount of research respected by my peers, and consulted with other pathologists and entomologists throughout the world, I do not believe that one can make assumptions such as those included in this supplement, in the 1994 EIS, or in the Regulations (Fed. Reg. Vol 60, No. 101) when dealing with potentially immense losses.

I believe that the analysis used to produce Tables such as 4-1 on page 23 should be documented here in the Supplement by the publications, data sources, etc. that were used to derive the conclusions or assumptions. I participated in an exercise (with APHIS in 1991) that resulted in a similar table and in that case, the output was based primarily on assumptions most of which were not supported by scientific studies or controlled experiments. If there are studies to support the contents of Table 4-1, they should be presented so that the public and the community of professionals can judge them. If such studies do not exist, APHIS should be made to reveal that fact.

On Page 24, APHIS claims to have "exercised caution in developing the mitigation requirements". I do not perceive that caution, nor any documentation to support the statement. I strongly request that documentation be required so that we can truly evaluate the caution that was exercised. The NEPA process was structured to obtain the most comprehensive, holistic assessment reasonable to determine the potential impacts of our actions upon the environment. I expect no less from APHIS. It is not simply a hoop through which one must leap.

TABLE 4-1 illustrates the dangers of poor knowledge coupled with flawed assumptions and the lack of proper documentation of supporting data. For example,

3

APHIS does not indicate what is meant by effective (E); nor does it present data or reference to data. We do-not know whether E means that the treatment will eliminate every individual of each pest or only 99% of the individuals (or even less). If it means the latter, survival of even a single individual fungus spore or virus molecule can be enough to establish the organism (or virus) and lead to a devastating epidemic. Thus, I firmly believe that APHIS must reveal the standard for effectiveness and document the rationale justifying that standard, unless of course effective means complete elimination. Next, I firmly believe that APHIS must provide the evidence for each of the E's appearing in the table. It seems reasonable to assume that methyl bromide when properly applied and the treatment supervised to assume that every surface of every log in a boat load of logs has received the proper amount of methyl bromide, the organisms on the surface would be killed. However, have the tests been made to show that such a treatment can be assured? The EIS process requires such a test, and the results should be included in the EIS document. A group of professionals cannot sit around a room and say that it should work and have their opinions accepted as scientific validation. APHIS should know that science does not work that way. Nor should the NEPA process.

1

TABLE 4-1 shows that kiln drying is "effective" against all pests listed. This may be true but the supplement lacks documentation even to the definition of the standards used. I saw in the regulations a reference to Agricultural Handbook 188- which contains prescribed schedules for drying. I do not have ready access to that manual, but I believe that it prescribes schedules for boards (up to 2 inches thick) and for dimension stock (up to 4 or 5 inches thick). I believe that the manual does not include schedules for timbers thicker than 5 inches.

With the Regulations in hand, I might assume that the steam heat treatment shown in Table 4-1 will result in a temperature of at least 71.1 degrees Celsius at the center of the log that will be maintained for a least 75 minutes. However the supplement lacks details and documentation, so there is no way that I or others can evaluate the effectiveness of the steam heat treatment. As for debarking, there are almost always depressions, etc., in or on logs that will be missed or only partially debarked.

4

That was clearly the case with the one debarked load of New Zealand logs that I was allowed to examine at the San Francisco Port. The bark that remained had larvae of both flies and beetles. I therefore question the validity of every **E** in the debarking column. I was not given permission to examine an early shipment of New Zealand logs into Sacramento, but I did see specimens and fungus cultures obtained from that shipment. Those logs were both debarked and treated with methyl bromide. Yet, several fungi were obtained, one of which caused a lethal disease of radiata pine. For reasons unknown, APHIS has chosen to completely disregard the pathogen in all of its assessments. I do believe that the omission was arbitrary and not in the best interests of the U.S. forest resources.

If there are data, published studies, or other evidence to support the contents of Table 4-1, APHIS has the obligation to report that. If no acceptable scientifically obtained data exists, APHIS should be required to reveal that fact.

With respect to Table 4-2, I believe that the regulatory requirement for saw log quality trees is a redundancy because no sensible person is going to send a worthless cull log across the oceans. Is its inclusion here designed to make the regulations look more impressive to the public?

Step 3 in this table, the fumigation of logs after debarking, is shown to reduce pests extensively or totally. Where is the documentation to support this very important conclusion? Does it exist?

My own experiences, the statements that I've heard from colleagues more familiar with the treatment than I, and the scientific reports that I have seen all indicate that methyl bromide fumigation can be expected to penetrate into wood only an inch or two. To state that the effectiveness of fumigation could be total (my emphasis) appears to be totally unsupportable. APHIS must be required to document its conclusion.

The fourth item, segregation of logs, must be complete and fool proof to be effective. Such segregation is going to be costly and very difficult to accomplish. Having seen the industry in operation, I believe that APHIS is relying on an unworlly expectation that will rarely or never be met. This expectation continues through Step 6 which also states "heat treat and process logs". Why wait until the logs are moved to

the processing facility before heat treating them? It would seem much more effective to require heat treatment at the point of origin. The danger of a pest escaping into the environment while logs are in storage or in transport across U.S. terrain is very real. Introduction of the Dutch Elm Disease fungus and the insect vector into eastern U.S. via the movement of a single log on a railroad car is a prime example. Given the locations of most of the processing facilities in or near forest land, the requirement to destroy any waste within 60 days of entry will allow ample time for many or most of the pathogenic fungi to escape. I'm sure that this applies to many insects as well.

Page 25

I see an explanation in the legend of Table 4-3 that states **E** equals a reduction of 95 percent or more in pest risk. However, APHIS does not inform us as to what the 95% refers, nor what pest risk means here. If they are stating that a 95% reduction in pest population equals a 95 % reduction in pest risk I would disagree. If a ship load of logs arrives with 100,000 beetles or 100,000 propagules of a fungus pathogen and though APHIS mitigation the population is reduced by 95%, there are still 5000 beetles or propagules that could be dispensed, a number far, far greater than needed to start a devastating epidemic. Depending upon the circumstances, I could reasonably argue that the risk had not been reduced at all. Without documentation from APHIS, I cannot accept the APHIS conclusion. It appears to have no scientific basis whatsoever.

Many of the S-E-T entries in Tables 4-3 and 4-4 appear to be off- the-wall assumptions with little or no scientific basis. Without supporting documentation, APHIS would have a difficult task defending some of the entries.

On page 26, APHIS states (and I concur) that by the time all mitigation steps are completed, some uncertainty remains. Yet, APHIS continues to insist that the probability of a "live" pest establishing a reproducing population in the U.S. is negligible. Logic does not appear to have a strong presence here, especially when one attempts to balance the uncertainty with the potential astronomical impacts if the judgment of APHIS is wrong

On page 29, APHIS states that "the pest risk assessments emphasized the

known forest pests that occur". The statement is made in a way which seems to imply that these assessments emphasized all of the known forest pests that occur. The implication is not true. Some known and potentially damaging forest pests were excluded. For example. There is a "strain" of Diplodia pinea (binomial used because of use by APHIS) in New Zealand which when it enters the tree bole through wounds colonizes the wood nearly completely and results in tree mortality. We have several "strains" of Diplodia pinea in the U.S., but none of them have been observed to attack trees as aggressively as the one in New Zealand. Thus, I believe that there is a strong reason to fear introduction of this pathogen from New Zealand. In fact, we believe that this pathogen was isolated from the shipment of logs from New Zealand that was debarked and fumigated prior to its arrival in Sacramento. Yet, APHIS has chosen to exclude it from all assessments.

DNA analysis and other advanced techniques are beginning to help us separate similar appearing organisms (eg., fungus) that have different requirements, different capabilities to cause damage, different tolerances for pesticides, etc. For example, about 50 years ago a group of fungi that appeared to be closely related, including the Dutch elm disease pathogen and the oak wilt pathogen were placed in the same genus, Ceratocystis. It took us about 30-40 years to recognize a very substantial difference among these fungi, regarding the chemistry of the cell walls was different. That may not sound significant. In fact, some might say the difference was negligible. However, the difference in response to the cycloheximide fungicides (potent systemics) was like night and day. For example, the Dutch elm disease fungus can tolerate and grow with large quantities of the fungicide in its environment, but the oak wilt pathogen is killed in the presence of a tiny amount. To make inferences because organisms may appear the same or very similar, as APHIS has done in these assessments, may be quite dangerous. If the stakes were not so high and if the results of errors in judgment could be readily connected even at a cost of millions of dollars, I would not be as concerned as I am. But errors involving exotic forest pests are often not reversible at any cost, and I can never forgive the person(s) who brought the chestnut blight fungus to this land.

Fields W. Cobb

7

FROM: Don Zimmerman
California for Alternatives to Toxics
Sonoma Office

P.O. Box 981
Glen Ellen, California 95442

TO: Mr. Jack Edmundson
Environmental Protection Officer / APHIS

RE: Comments to the Draft Supplement to the EIS. Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, December 1997

Dear Mr. Edmundson

Before commenting on the SEIS I would first like to raise an important issue that seems to still elude you. I discussed this with Richard Orr on two separate occasions prior to release of the EIS and he concurred that APHIS, the world's leading scientists, (many of which were used by USDA for the Siberian pest risk assessment team), and concerned environmentalists have all agreed on one thing: There is only one method of pest eradication in dealing with whole log importation that insures a negligible risk of introducing unwanted pests and that is heat treatment. All other mitigation measures combined do not do what heat treatment (that raises core temperature to 71.1C for a period of 75 minutes) can do which is kill all pests, including ones deep in the wood. Alternative 4 was changed to exclude treatments other than heat with follow up prophylactic pesticide treatment to prevent re-infestation. Unfortunately, Alternative 4 is also the alternative that required treatment of all wood products including tropical hardwoods. Because tropical hardwood may not pose the same threat and because this alternative has been deemed as unnecessarily prohibiting trade, this was not the preferred alternative. However, in my discussions with Richard Orr, the point I was trying to make was that an alternative needed to require heat treatment of all imports, but that an alternative was needed that was similar to Alternative 2 except that the main primary method of treatment was heat treatment and not fumigation. This was an idea that was expressed by many of the experts on the PRA team and somehow lost in the shuffle. The merits of this new alternative are overwhelming and though it wasn't raised during court proceedings it is still very important to consider at this time as it would answer many, though not all, of the concerns environmentalists and scientists have expressed and that were upheld by the courts.

ALTERNATIVE 7

This alternative would be identical to Alternative 2 except that heat treatment followed by safeguarding the wood, at the source of origin, would be used instead of fumigation. For all your tables that list articles and requirements under Alternative 2, delete fumigation and replace with heat-treatment that is followed by either storage and handling which excludes pest access or a prophylactic borate pesticide treatment to prevent re-infestation. De-barking should still be required. Preservatives would not be allowed for use as they are too dangerous and would end up in the finished product.

It's that simple and yet it would be the only viable compromise between Alternative 2 which is favored by APHIS and industry and Alternatives 4, 5, and 6 which are the ones most favored by both the scientific community and the environmental community. Alternative 7 would still allow for a systems approach of site and type determinations that use risk analysis to identify need as industry wants and yet would use a viable form of pest eradication which scientists, environmentalists and the courts have asked for. It would solve the problem of what to do when methyl bromide is discontinued and save the Earth and the ozone layer from the damage caused by using methyl bromide from now till it is discontinued. It would protect mill workers from an overburden of chemical exposure during the milling process and would give us a finished manufactured product that does not contain toxic chemicals. And the last and probably most important aspect of using heat treatment instead of relying on other ineffective methods is that we will actually reduce the pest risk to negligible levels, which you have stated is your goal. Since the courts have stated that your responsibilities include considering impacts on trade and not just to protect us from pest introductions, Alternative 7 is by far the only real compromise that could be reached.

There would still be bugs that would need to be worked out, such as verification, but they remain problems no matter which alternative is implemented and it seems that you have the methodology to verify heat-treatment at the source (pages 38-41, Draft SEIS). The main thing to understand is that a viable form of pest eradication is being proposed for use at the source of origin. Your unwarranted assumption that mitigation measures that are not effective individually will be effective in tandem was preposterous when it was first used and can only be considered

ridiculous in its continued use. Why open yourself up to continued court proceedings and further loss of the public's trust when a simple change in methodology from an ineffective and dangerous mitigation regime to the only effective one known solves the problem. If you continue to try and justify the use of methyl bromide as the best method of eradication when it has been proven to be ineffective, and in light of the damage it does to the environment and subsequent ban in 2001 on its continued use, I can only hope that the courts, at this juncture, agree that your decision is arbitrary and an extreme abuse of discretionary powers.

Personally I and many other members of the environmental community as well as scientists from your own Sberian PRA team strongly feel that Alternative 6 is the only hope we have of keeping our forests safe from pest introductions and infestations. This has been stated numerous times and is more reflective of the requirements imposed by Europe and New Zealand. However, since it appears that this alternative has little hope of being adopted, I beg you to consider an Alternative 7 as I have presented it. Thank you.

There is one other point that I would like to raise before proceeding. I feel very strongly that APHS needs to reconvene the panel of experts that it used for the Sberian Pest Risk Assessment and allow these scientific experts to choose new members to fill any gaps in the panel. Then I would like to see these experts do a pest risk assessment for the most commonly used forms of damage and identify any risks that need mitigating. As Jack Latin and Fields Cobb pointed out, just being de-barked does not mean risk free. Since damage has been suspected in numerous introductions to different countries, and most recently the pine shoot beetle to the Great Lakes states and the Asian long-horned beetle to New York (Pg. 44, DSEIS), I think we need to review this aspect of importation and come up with a clearer picture of what is needed. The same panel should also do new PRA's as they are needed. After seeing the level of concern exemplified by APHS concerning the risk of introductions and infestation, I feel very strongly that we need to let the scientific community guide us in identifying risks and how to deal with them.

Now I would like to comment on the draft supplement to the EIS (DSEIS). I don't wish to belabor the point and I know you are already aware of this, but it has been stated very clearly by both scientists and state agencies responsible for protecting their own states from pest introductions, that Alternative 2 will result in continued introductions. This has been stated emphatically numerous times. The concern being expressed is very real. Why do you ignore these concerns. Why do you continue to justify an unjustifiable position. One of the best examples of how dangerous adopting Alternative 2 would be can be found on page B-53 of the EIS in a letter submitted by the Oregon Department of Agriculture (ODA). They ask, "would the new regulations have prevented the introduction of Dutch Elm Disease." Since there is an excellent chance that the fungus would survive fumigation, pass inspection and then, while the logs were awaiting milling, be picked up by the American elm bark beetle which would vector it to living trees, their hypothesis sensibly states, "Sooner or later the result would be the same as actually happened in the 1920's: Dutch elm disease would become established and would kill millions of native elms." If the reasoning used by ODA is sound then how can you state that Alternative 2 reduces the risk of introduction to negligible levels. If deep-wood pathogens and other pests are not eliminated by the mitigation regime proposed under Alternative 2, then this alternative wouldn't even reduce the risk to moderate levels and instead leaves the door wide open for new introductions.

Which brings us back to our concern which was upheld by the courts over your failure in the EIS to "discuss in a significant manner the uncertainties about the risks of infestation and the adequacy of control measures." On page 26, paragraph 2 of the DSEIS, you state "Tables 4-3 and 4-4 demonstrate that the combination of requirements imposed before a shipment of logs from New Zealand or Chile enters the United States will result in a range of extensive to total reduction of the risk that a live exotic pest will remain with the imported logs." I don't understand how you can make such a deduction. In fact I am more confused now than I was before reading the DSEIS. A case in point is table 4-3 which is supposed to mirror the New Zealand PRA. In the New Zealand PRA there are numerous pests which the report states will probably be introduced into the U.S. even after the mitigation regime you proposed had been implemented for that PRA. The New Zealand PRA is the only PRA that is prepared with the analysis done after mitigation procedures are applied. The New Zealand PRA mitigations proposed include rapid processing from felling to shipping, debarking, fungicide and insecticide treatment, visual examination, and fumigation. These procedures are more stringent than the proposed regulations since they call for fungicide and insecticide treatments. Even with this added protection there are numerous pests, listed below, that would not be eliminated from log shipments. All quotations are taken from the New Zealand PRA.

Leptographium truncatum: "There are no known effective control methods for this fungus in logs." The PRA later states that: "The lack of documented effective mitigation measures suggests that L. truncatum would eventually enter the United States. Subsequent colonization is probable."

Pronoplus reticularis (huhu beetle): "Even with debarking, treating the surface of the logs with insecticides, and fumigation with methyl bromide, this pest still has a chance of infesting logs. The beetle penetrates throughout the wood and has tightly packed, frass-filled tunnels, so that fumigation would not be totally effective. Surface treatment of the logs would not kill the emerging adults because of the long residual time needed." Also of concern with the huhu beetle, if it did become established in the United States, the PRA states, "There are no known control techniques for this beetle."

Sirex noctilio (wood wasp): "Other life stages of S. noctilio deep in the wood are not effectively treated by fumigation."

Other fungi possibly present in log shipments for which there are no effective mitigation measures, according to the New Zealand PRA, include: Amylostereum acrolatum, Armillaria spp., Diplodia picea, Ganoderma mastoporum, Ischnoderma rosulata, Junghuhnia vineta, Peniophora sacra, Ophiostoma spp., Ceratocystis spp., Leptographium spp., and Ceratocystopsis falcata.

Of the seven pests analyzed in detail in the New Zealand PRA, (pg. 3-7, Table 3-2), the wood wasp, the huhu beetle and the two pathogens, Amylostereum acrolatum and Leptographium truncatum, have no known effective control options. Debarking and pesticides are not effective and fumigation is considered probably effective but needs research except for A. acrolatum where it is considered probably ineffective but needs research. However, in the case of the wood wasp in late stages and the huhu beetle, this listing of probably effective but needs research is in contradiction to the information contained in the pest risk assessment and a listing of probably ineffective but needs research would have been more appropriate). In the listing of A. acrolatum it is important to note that heat treatment is the only form of mitigation that is given any chance of being effective and yet it is the only form of mitigation that is not presently required in the proposed regulations for logs from New Zealand.

Now, before I even begin to explore the comments and recommendations of the scientists that you asked to review the New Zealand PRA, I would like to try and come to some understanding of your extrapolation of the information contained in the New Zealand PRA (NZ PRA) to its current state in the DSEIS.

On page 25 of the DSEIS Table 4-3, Raw logs-Pathogens and Pests vs. Mitigation, New Zealand, is a table that I would assume is supposed to mirror the information in the NZ PRA. How was this done and how did Orr come up with these conclusions? Was there other information used other than the NZ PRA? I am very confused because I don't see how anyone could extrapolate the information in the NZ PRA and come up with the conclusion that fumigation will produce extensive reduction of Sirex noctilio and its related fungus, Amylostereum acrolatum. Leptographium truncatum, and huhu beetles. I have read the NZ PRA repeatedly and I honestly cannot understand the logic and science that Orr is using and can only assume that there are studies or information that he has access to that I am not aware of. If this is the case, would he please be kind enough to share them with us so we too can feel re-assured that he knows what he is talking about.

Then, to compound the problem of being able to understand the issue at hand, the DSEIS states on page 26 that "Tables 4-3 and 4-4 demonstrate that the combination of requirements imposed before a shipment of logs from New Zealand or Chile enters the United States will result in a range of extensive to total reduction of the risk that a live exotic pest will remain with the imported logs." How? Where? When? What am I missing? I feel my brain beginning to throb. I'm really trying hard to understand this latest extrapolation from a table that I couldn't understand to begin with and I am totally at a loss. How can statements like "would eventually enter the United States" and "are not effectively treated by fumigation" and after all mitigations "still has a chance of infesting logs" become the basis for your assumption that the risk of introduction is "negligible because of the mitigation measures and the sequence in which they are applied."

There can only be two explanations that I can think of. One, I have missed some important research that you have failed to mention as the supporting document for your conclusions or two, you have done your best to take unsupported assumptions and juggle them around so as to hopefully confuse and bedazzle people into thinking that everything was all right and you had fulfilled your requirements for NEPA as requested by the courts. If number one is correct could you please show the documentation that supports your conclusions. If number two is correct then you are not only guilty of an extreme abuse of discretionary powers, you have also possibly entered into the realm of a conspiracy to defraud the public trust and this is not a matter to be taken lightly. Our forests are in a weakened state through years of mismanagement. To place them at an unnecessary risk of destruction through infestation at this time would be one of the most dangerous actions a government agency could partake in. I will continue with my concerns on the DSEIS.

In the middle of the paragraph (I have referenced above) on page 26 you put forth your redundancy theory of effective measures further reducing the chance of pest survival. Once again I need to ask, what effective measures against what pests are you talking about? If you talking about deep-wood pests then there is no effective mitigation

except heat treatment and that's not required until the wood has been here as long as 60 days, giving ample time for dissemination. I don't care how many times you apply different treatments, if none of the treatments in question are effective against a certain pest then you will not reduce the risk for that pest. You might kill the surface pests over and over but you still haven't touched the deep wood pests. At this time I would like to quote some of the experts that have worked with your PRA teams or have commented on either the DEIS or the EIS:

"The questions concerning the effectiveness of the proposed mitigation procedures coupled with an inability to reliably confirm their completion make it likely that pest containing logs will enter the U.S." (J. Morrell, DEIS)

"Mitigation measures outlined in the draft NZ pest risk assessment would not be adequate if pinewood nematode is in the timber under consideration." (ODA, NZ PRA)

"The fact remains that until proper mitigation procedures are available to guarantee pest-free logs, and they are not now available, such logs should not be brought into the country." (J. Latini, NZ PRA)

"Statements about methyl bromide are also strange, especially so since the publication of Cross of New Zealand (1991) stated that only a 100 mm penetration occurred on logs and concluded it was an ineffective way to solve the problem. What about pests deeper than 100 mm." (J. Latini, DEIS)

"There have been repeated inquiries regarding the proper treatment of wood chips and how effective methyl bromide is on such material. One shipper of chips informed me that there was very little diffusion in wood chips because of the compaction. Where is the scientific documentation on fumigating wood chips?" (J. Latini, DEIS)

"How certain are you that fumigation is sufficient with these hardwoods? Frankly, we doubt that it is, and we are left with the feeling that much in this EIS is inadequately supported." (F. Cobb and D. Wood, EIS)

"I remain unconvinced that methyl bromide fumigation will have any effect on survival of fungi established more than a few cm. into the wood." (J. Morrell, NZ PRA)

"Neither methyl bromide, nor any other fumigant can reliably penetrate to the center of a log in the 72 hour treatment period as per T312. As a result it is unlikely that fumigation will mitigate the risk of pest introduction in logs and other large timbers." (J. Morrell, DEIS)

"Fumigation with T404 is not likely to kill the destructive deep wood wasp, *Sirex noctilio* and its associated pathogenic fungus *A. areolarum* found in New Zealand radiata pine." (ODA, DEIS)

"Considerable risk (perhaps unacceptable risk) of introducing dangerous pests (especially pathogens) will exist until an efficacious deep wood sterilization is developed and verified. I suggest stating more clearly the importance of deep wood sterilization in the mitigation strategy, as well as the current lack of efficacy data for such treatments." (A. Kanaskie, Oregon Dept. of Forestry, NZ PRA)

"Efficacy of the 'Current New Zealand Mitigation Activities' has not been demonstrated to our knowledge against all the serious known pest risks cited in this assessment. Live fungi and insects have been found on New Zealand logs imported into the United States." (Oregon Dept. of Agriculture, (ODA), NZ PRA)

"We should not assume that fumigation treatments for a fungus that occurs in the outer ring of oak (with larger vessels) will be effective against a fungus that colonizes through the entire sapwood of pines." (F. Cobb, NZ PRA)

I could go on and on but I'm running out of time. In light of all the information and recommendations that these and other scientists have presented you with, how can you conclude that the preferred alternative will reduce the risk of introduction to negligible levels? The courts were very clear when they stated that you weren't being clear and that you needed to become clear. Instead it appears you have done your best to confuse the issues even more than before. When the courts said that you biased the EIS in favor of the preferred alternative, I don't think their intent was to get you to re-word your bias so as to appear unbiased. They wanted you to actually be unbiased. This does not seem to have occurred. Instead you have spewed forth and strung together assumptions and distortions of the facts to once again bias your findings towards adopting the preferred alternative. On page 24 of the DEIS you state: "Because the consequences of introducing an exotic forest pest or pathogen can be severe, APHIS exercised caution in developing the mitigation requirements." You did. Where? If heat treatment is the only mitigation that actually reduces the risk to negligible levels and it has been largely ignored as a source of origin mitigation, how can you say you have been cautious. On page 32 you state: "Decisions regarding treatment methods are based on the professional judgment of recognized experts using the best available scientific information." What scientific information are you talking about? What experts are you talking about? When the world's leading scientists tell you that the best available scientific information does not support your claims, you have ignored them. How are you able to extrapolate the exact opposite and claim that they have guided you?

On page 31 you state that the only treatment that is effective against all pests is heat treatment. Then you state that debarking, pesticides and fumigation are effective against some pests and ineffective against others. This is the most honest statement you make in the whole DEIS. How can you, knowing this, then propose regulations that

call for using the ineffective mitigations while basically ignoring the only effective one. Is this being cautious? Is this following the advice of the scientific community using the best available scientific information? Is this doing your best to insure that unnecessary risks are not being taken? All this DEIS does is raise more questions while avoiding the ones you were supposed to answer.

On page 19, paragraph 3, you state that each treatment and procedure has its limitations. In this same paragraph you state that heat treatment is the only treatment to be acknowledged to be effective against all pests. Then you state that this must be followed with segregation to ensure that it is not reinfested but that this process is difficult and may not be economically feasible. At no time do you mention that the wood can be prophylactically treated with borates or pesticides if segregation is unfeasible. Again you have started to bias the DEIS away from heat treatment and towards the preferred alternative. For the sake of argument, let's say that sometimes a pesticide treatment is the only feasible follow-up to avoid reinfestation. With this added form of protection let's examine the treatment limitations as they apply to heat treatment and the possible Alternative 7.

A) "It may negatively affect certain qualities or the value of the wood." On page B-11 of the EIS you state, "APHIS has not found sufficient scientific data to determine the deleterious effects of heat treatment on logs and other regulated wood articles although it is believed that heat treatment may affect the quality of certain tropical hardwoods." Alternative 7 wouldn't require treatment of tropical hardwoods unless a specific risk was identified. It has also been mentioned that with some research, scientists feel that methods of heat treatment could be made operational that have no deleterious effects whatsoever. Then you go on to state, "While treatments other than heat are available, this treatment does provide an alternative to the use of methyl bromide or other chemicals, and, therefore, may be preferable for certain uses." Since only certain tropical hardwoods may be affected deleteriously, I assume that, when you state, "may be preferable for certain uses," you mean other than on the tropical hardwoods that may be affected. If this is true, then that would make the new Alternative 7 your preferred alternative, since that is what it would require. Finding a method of heat treatment that doesn't have negative impacts on the quality of the wood is of course important and one that may need more research.

B) "It may not be totally effective against all pests." Of course this doesn't apply as heat treatment does it all. I might add that this particular fact is the most important aspect of the discussion at hand and a point that needs to keep being made. HEAT TREATMENT ELIMINATES ALL PESTS. It can not be stated enough and in fact should be hung in large, bright letters over the entrance to your offices.

C) "It may be economically infeasible." Not sure, because I have never seen a cost comparison with other forms of mitigation. I do know that heat treatment is the only mitigation that is 100% effective and that in itself could save the taxpayers of this country billions of dollars from forests not ravaged and pest eradication programs not implemented. There is also the hidden environmental and health costs of methyl bromide use and the fact that in two+ years it won't be allowed for use. There would also be the cost savings generated by not having to treat the wood at the ship yards which has already had to be done on shipments that were originally fumigated and the savings generated by not having to heat treat alter milling. In the long run it is probably the most economically feasible alternative.

D) "The technology may not exist to practically apply the treatment." Yes it exists. In fact, as was stated in the DEIS, a new form of heat treatment has been documented that holds good promise, which is shipboard heat treatment. This form of heat treatment would eliminate the need for having to safeguard the wood after treatment. It has also been said by the company that is designing this method of heat treatment that it doesn't affect the quality of the wood. Worth looking into.

As you can see APHIS' heat treatment at the source of origin (or possibly in transit) doesn't really have alot of limitations. When you compare it to the limitations that all other mitigations have, even when used in tandem, there is no reason to consider any other form of pest eradication other than de-barking and heat treatment followed by safeguarding the wood, at least as far as what needs to be done before the wood articles arrive in the U.S. All of your efficacy tables from the PRA's support this as does all the input you have received from the scientific community.

There is so much more of this DEIS that I would like to comment on but as has happened during each comment period, I have run out of time. I would like to say that your comment on page 42& 43 that you have already discussed in detail human health concerns from mitigation treatments is absurd and refer you to my comment letter to the DEIS that addressed your lack of accurate assessment of dangers to mill workers exposed to toxic logs. I would also like to say that your comparison table on page 60 does nothing to further the discussion of the differences between the alternatives and how they would affect us and the environment. But I also know that like your other tables in this DEIS it would take much time and mental stress to try and show you how it fails to answer the concerns of environmentalists, the scientific community or the courts. If you would extend the comment period I

Dan Zimmermann

continued

p. 25 Table 4-3 Raw logs--Pathogens and Pests vs. Mitigation shows eight categories of potential of harmful organisms that might be introduced from New Zealand. Of these, four (*Sirex*fungus, *Leptographium*, Huhu beetles, and unknown pests) would be allowed to be potentially introduced onto U.S. soil before final mitigation treatments. APHIS then offers these pests a 60 day window of opportunity to escape and invade (page 26). I have trouble believing that a combination of methods can be expected to effectively prevent pest introductions with such a gap in the sequence.

p. 26 "The treatments all result in total reduction of pest risk..."

The underlined phrase strikes me as a bit oxymoronic.

p. 27 "The regulations will be adjusted to include new or improved methods and strategies for pest exclusion as they become available."

The on board, in-transit heat treatment as promoted by Fibreform seems a very worthy improved method that would effectively eliminate the time window of final mitigation on U.S. soil. I encourage you to foster such an approach. I am uncomfortable with irradiation for the simple reason of the infrastructure needed for this approach to pest management will likely become another layer of toxic waste sites across our land.

As to the "strategies for pest exclusion", you have them in hand. They are called the stricter alternatives (e.g. Alternative 4--Prohibit Untreated Wood). Considering that litigation, court injunction, and blistering reviews by numerous experts has not altered the regulation but a smidgen (upping the treatment temperature and time) I must wonder what it would take to get the regulations "adjusted".

p. 33 "APHIS is developing science-based pest-risk standards to comply with the [NAFTA and GATT phytosanitary] standards".

Please make sure that you integrate the point on page 30, "The most difficult organisms to assess for pest risk potential are those that are not known to be pests in their native habitats, but which may become pests if introduced and established in the United States".

p. 42 "APHIS believes that the requirements for the importation of logs, lumber, and other unmanufactured wood articles, under 7 CFR Part 319, protect the United States from the importation of plant pests."

The recent introduction of the Asian long horned beetle into Brooklyn is believed to have been in untreated pallets or other solid wood dunnage that is only required to be debarked under these regulations; even if eradication is successful, this deep boring pest could readily be reintroduced under current regulations.

This single example makes a mockery of APHIS' claim of protecting our country from plant pests. If these regulations were based on adaptive management then the logical action for APHIS would be to add regulations prohibiting import of greenwood pallets with any commodity. It indicates that existing permits warrant review.

Page 2

continued

p. 47 "A number of risk assessments have been prepared for programs that use pesticides that also might be used for forest protection programs. Therefore, APHIS is aware of any potential human health risks from these pesticides."

This claim is offensive. One in three Americans is slated to get cancer; one in four will die from this malady. By the early 21st century one in two of us can expect to get some form of cancer. Surely pollution, including pesticides, have some role in such ghastly cancer rates.

There are also other toxic effects of pesticides that have barely been investigated, including damage to the immune system, nervous system, reproductive system, and endocrine system. As such, the toxicology is far from "comprehensive" for most compounds and to claim otherwise is hubris.

p. 48 "The likelihood of these herbicides being used for pest management control is negligible because of the improbability of viable plant material being introduced on imported logs, lumber, and other unmanufactured wood articles."

This statement seems to forget the experience with white pine blister rust (WPBR) and the massive, and futile, efforts to destroy its alternate host, *Ribes* spp. If a plant pathogen like WPBR were to get established, the alternative host(s) would obviously be a concern and factored into any management/eradication efforts; weeds need not be introduced for APHIS to be compelled to use large amounts of herbicides.

p. 63 "The establishment of nonindigenous organisms has been shown in some cases to clearly reduce biodiversity in affected areas (OTA 1993)".

This is the main reason why I have any interest in the matter of raw wood imports. I would like to take this opportunity to remind those seeking, or considering granting, injunctive relief that humanity is precipitating a mass extinction on par with the crash of the dinosaurs 65 million years ago (4). Biological invasions are now recognized as a form of global change (5), and are presently considered to be the second most important factor in the decline of sensitive species and disintegrations of ecosystems (6).

Obviously organisms that can decimate entire forests are among the most hazardous and warrant the strictest possible protective measures. Given the current severity of the biodiversity crisis and our level of understanding of the colossal risks of introducing forest pests, the reports prepared APHIS (the original Environmental Impact Statement and this draft supplement) are egregiously deficient works that trivialize our nation's natural heritage.

p. 34 "Because of recent trade agreements and the importance of trade to the U.S. economy, APHIS and its inspectors are working to facilitate the flow of cargo and people into the United States while protecting U.S. public health, agricultural, and biological interests".

While my main concern is biodiversity, I believe the central flaw of the EIS and this draft supplement is that they have been written under tremendous pressure from a

Page 3

continued

conflicting interest within USDA more concerned about lubricating trade than protecting our nation from harmful organisms. The above quote well illustrates the apparent order of priorities of APHIS under current USDA rule. An analysis by four pest experts at the University of California Center for Exotic Pest Research (CEPR) on APHIS' proposed rule for the importation of Hass avocados from Mexico also pinpoints a conflict of interest as the potential source for generating an inferior proposal with multiple flaws. The authors state:

"For many years, APHIS has been involved in facilitating U.S. export trade and enhancing the marketability of U.S. agriculture. This function is a natural extension of APHIS' other duties and has not resulted in a weakened policy regarding APHIS' major responsibility for preventing the introduction, establishment, and spread of exotic pests

In our opinion, however, asking APHIS to also facilitate import trade is a total conflict of interest and a clear departure from their historical mission. This conflict is irreconcilable. We strongly urge USDA to reconsider this mandate." (underlining theirs) (7)

The 160 page analysis then methodically unveils the plethora of flaws and dangers in the proposed rule. For example:

"APHIS has proposed nine mitigation measures as a systems approach 'which individually and cumulatively reduce the risks of the pests indicated above... to an insignificant level'.

"CEPR has concluded that critical deficiencies in entomological knowledge about Mexican avocado pests invalidate the risk potential assumptions of the proposal...the Proposed Rule is without real antecedents, and in fact, attempts to set an important precedent within APHIS involving the use of the systems approach to provide phytosanitary security within the context of a complex multi-pest system... CEPR considers that the Systems Approach embodied in the proposed rule is unacceptable... The Risk Assessment contains undocumented assertions, highly questionable estimates, and improper methodology; as a result, we consider it to be invalid." (7)

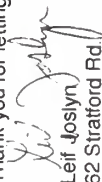
I consider this highly relevant because, combined with the controversy surrounding the poor quality of the Environmental Impact Statement (on Importation of Logs etc.) it suggests that APHIS may be abdication its primary responsibility of safely regulating many imported commodities and materials. I suggest, therefore, that a review of all proposed rules for import regulations prepared by APHIS be conducted with the purpose of determining to what extent their "new mandate" has sacrificed the science, public participation, and APHIS' original purpose of being the "keeper of the gate". If an agency-wide capitulation to an opaque trade-driven command is identified, this glaring conflict of interest should be rooted out and APHIS' original mandate restored.

Page 4

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I also suggest that APHIS conduct an anonymous agency-wide survey of all its employees inquiring if they feel there is a conflict of interest in the "new mandate". I submit that failing to do something akin to these two suggestions would only help to confirm what they ideally would disprove.

Thank you for letting me comment. Please keep me informed.


Leif Joslyn,
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References

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Page 5

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February 10, 1998


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RE: APHIS Draft Supplement to the Environmental Impact Statement, December 1997

The attached comments were prepared by a collaborative working group comprised of Servicio Agrícola y Ganadero ("SAG", Agricultural and Livestock Service), Corporación Nacional Forestal ("CONAF", National Forest Service), and Instituto Forestal ("INFOR", Forestry Institute) from the Chilean public sector; and the Corporación Chilena de la Madera ("CORMA", Chilean Forest Products Association) from the Chilean private sector.

The Government of Chile and the Chilean forest industry support the efforts of the United States Department of Agriculture to protect its national forest resources from damaging infestations of plant pests. Chile is recognized for having highly effective pest management programs which prevent such infestations from occurring in Chile and affecting our exports of wood products to the United States. We believe that the Supplement to the Environmental Impact Statement complies with the rulings of the U.S. District Court and that the injunction preventing the issuance of new import permits for certain wood articles will therefore be lifted promptly. We will continue to cooperate with the United States in their efforts on this matter.

Sincerely yours,


Daniel Carvallo
Deputy Chief of Mission
Embassy of Chile

COMMENTS ON THE APHIS DRAFT SUPPLEMENT TO THE ENVIRONMENTAL
IMPACT STATEMENT

INTRODUCTION

Since the 1970's, the Chilean forestry sector has experienced significant growth almost exclusively as a result of tree farming on private plantations. These plantations mainly grow two species: Radiata pine (*Pinus radiata*), a species originating from the United States, and more recently, Eucalyptus (*E. globulus*), originating from Australia. Of these two species, only the Radiata pine is exported to the United States.

The geographic isolation of Chile, which is surrounded by ocean, mountains and desert, is conducive to the maintenance of healthy forests, because Chile's natural barriers limit the introduction of pests. Furthermore, the silvicultural management applied to the cultivated forests, including the use of improved seeds, soil preparation, fertilization, phytosanitary protection, pruning and thinning, and early harvesting ensures a sanitary product. Moreover, the prevention programs carried out jointly by government and private industry ensure that new pests and pathogens are not introduced into Chile and that the few minor pests and pathogens that can be found in Chile are not exported

The Chilean forestry industry also undertakes many precautions during the production, transport, and packing of logs and lumber to ensure that they remain free of infestation of any

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type. Primary among these precautions is the use of kiln-drying on lumber for export. The success of these efforts can be seen by the list of countries with high phytosanitary standards that import wood from Chile. Moreover, the U.S. government (and APHIS in particular) have had the opportunity to witness the vigilance of the Chilean inspection service firsthand through the U.S.-Chile Cooperative Agreement for fruit and vegetables.

Accordingly, it is the view of the Government of Chile and the Chilean forestry industry that the draft Supplemental Environmental Impact Statement ("SEIS") correctly concludes that any risk of infestation from Chile can be controlled through the series of identified preventive measures.¹ Additionally, the SEIS successfully addresses the three deficiencies identified by the U.S. District Court for the Northern District of California in its opinion of June 5, 1997. In specific, the SEIS: (1) evaluates whether individually ineffective control measures will

¹ Although the Chilean forestry sector utilizes treatment measures more rigorous than those required by the existing U.S. regulations to ensure that its wood exports are pest-free, it should be noted that APHIS has a tendency to overestimate the risk that pests and pathogens allegedly found in untreated Chilean wood could cause harm in the United States. For example, Table 4-4 lists "needle diseases" as a pathogen present in untreated Chilean wood, and the 1993 Pest Risk Assessment of Chilean wood identifies six species of needle disease that pose a moderate risk of harm in the United States. Yet, four of these diseases, *Mycosphaella dearnessii*, *Dothistroma pini*, *Cyclaneusma minus*, and *Lophodermium spp.* are already found in the United States. ("Diseases of Pacific Coast Conifers" (USDA, 1993) and "Fungi on Plants and Products in the United States" (Farr et al., 1989)) In addition, there is no record of *Mycospharella dearnessii* in Chile and it is on Chile's list of quarantined pests.

be effective collectively; (2) addresses uncertainties in the risk assessment and control measures, compliance by exporting countries, and human health effect of control measures; and (3) provides a comparison of the alternatives considered in a manner that is conducive to public participation.

I. THE FORESTRY INDUSTRY IN CHILE.

The growth of the Chilean forestry sector has been fueled by a growing economy, well-educated workers, sizable areas of land available for planting, and a favorable climate for cultivation of rapid-growth species. The following are statistics concerning the Chilean forestry industry:

Total Plantations as of 1996	1,836,000 hectares
Radiata pine	1,387,000 hectares
Eucalyptus	309,000 hectares
Other tree species	140,000 hectares
Total Annual Harvest in 1996	22,938,000 m3
Radiata pine	17,995,000 m3
Eucalyptus	1,799,000 m3
Other cultivated species	126,000 m3
Native forest species	3,018,000 m3
Total Forest Product Exports in 1996 (U.S. \$)	1,807.9 million FOB
Logs	103.5 million FOB
Lumber	185.6 million FOB
Chemical pulp	764.4 million FOB
Newsprint	98.0 million FOB
Panels and veneers	96.2 million FOB
Remanufactured lumber	43.6 million FOB
Chips	170.9 million FOB
Furniture	33.0 million FOB
Other	312.7 million FOB
Forest Product Exports Share of Chile's Total Exports	11.8%

Number of Destination Countries for Forest Products

89

The growth of the forestry sector is a result of a significant increase in planting rates, which have grown from an annual average of 16,000 hectares before the 1970's to an annual average of 90,000 hectares between 1970 and 1996, with a positive annual balance between hectares of plantations established and hectares harvested. ("El Sector Forestal En Chile: Logros y Desafios," Instituto Forestal, 1992). An average of 90,000 hectares are planted each year while only 35,000 hectares are harvested, on average, during the same period.

It is worth noting that the expansion of forestry in Chile has been carried out in an environmentally sound manner. Because the industry is dominated by private plantations, the native forest has been preserved. Moreover, the plantations have increased the protection of soils which were in a eroded state ("Efectos Provocados en el Sitio de las Plantaciones de Pino radiata y Eucalipto," Instituto Forestal, 1994). The increase in new plantings has also made an important contribution to the reduction of the greenhouse effect, because growing trees assimilate a large amount of carbon dioxide. (Forestry Plantations and Their Contribution to Atmospheric Carbon, W. Sutton, 1992).

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As mentioned above, as plantations have become widespread, the harvest of the native forest has diminished. Currently, there are 13.4 million hectares of native forests ("Catastro y Evaluación de los Recursos Vegetacionales Nativos de Chile," CONAF, CONAMA, 1996) representing 17.8 percent of the national territory, of which 3.9 million hectares, 5.2 percent of the country, has been incorporated into the National (state-owned) Protected Wildlife Areas System. The plantations, which cover 1.8 million hectares, 2.8 percent of the national territory (*see id.*), supply more than 86 percent of the harvest. (Estadísticas Forestales, 1996, Instituto Forestal)

As a consequence of Chile's small domestic market, the timber industry, like other important sectors of the country's economy, must be geared to external markets. This has been possible because of economic policies based on open market trade, policies which have enabled Chilean companies to attain improved levels of efficiency and productivity. Chile is open to imports from other countries, and the Chilean economy depends on the ability to export its products to those countries. In 1996, Chile imported goods and services from the U.S. totalling U.S. \$4,109.5 billion and exported U.S. \$2,559.1 billion to the U.S. (Boletín Mensual, Octubre 1997, Banco Central) In recent years, this opening of the economy has been buttressed by the World Trade Organization Agreements and by several bilateral trade agreements, signed with European, Asian, North and South American countries, directed toward a total opening of trade.

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The United States has become the second largest destination market for Chilean forest products, with a total of US \$233 million FOB in 1996, representing 12.9 percent of the sector's total exports. Five years ago, this value was US \$68 million and ten years ago it was only US \$20 million. This growth has occurred because of the United States manufacturers' need for wood that meets high quality and sanitary standards. There has also been a growing interest on the part of the United States' forestry firms in the Chilean forestry industry. This has resulted in a considerable increase in U.S. investment in the Chilean forestry industry.

The favorable sanitary and growing conditions that exist in Chile, the confidence among national and foreign investors, and a growing volume of available timber during the next years, lead to a positive outlook for the forestry sector. Recent supply projections indicate the availability of more than 23 million cubic meters of Radiata pine wood in the year 2000, and of 30 million cubic meters in the year 2015 (Informe Técnico No. 125." Instituto Forestal). In addition, 4 million cubic meters of Eucalyptus are forecast to be available in the year 2000 which will increase to 9 million cubic meters by the year 2015 ("Informe Técnico No. 138," Instituto Forestal). Therefore, investment in forestry plantations is expected to increase in the future. Much of this investment will originate from abroad, to a considerable degree from the United States.

Any major import restriction imposed by the U.S. government will have a considerable effect on the economic health of the sector, given the relative importance that the United States market has acquired for Chile. Already, uncertainty has affected the evaluation of new projects that companies are considering, because of the importance of the United States as a destination for future production.

In particular, the current injunction obstructs any new business transactions by United States companies in the Chilean forestry industries in product segments subject to import permit restrictions. The current restriction limits all imports of unseasoned timber. While this is not a significant export to the U.S. for Chile at the present time, it represents great potential for the future. In the long run, restrictions will lead to a decline in employment in forestry, owing to less investment, less production, and fewer plantations.

It is also important to point out that a U.S. import restriction on Chilean wood could also result in restrictions by other destination markets for Chilean exports, by spreading doubt concerning the sanitary conditions of the country, with a consequent negative economic impact.

II. THE GEOGRAPHY AND CLIMATE OF CHILE ARE CONDUCTIVE TO THE TO THE GROWTH OF HEALTHY, CLEAN TREES.

The plantations of exotic species in Chile, mainly Radiata pine and Eucalyptus, are significantly free from the main insect

pests and diseases that affect these species (USDA, 1993). This is due mainly to the following considerations:

Neither the *Pinus* nor the *Eucalyptus* botanical genuses are indigenous to Chile, so they are free from the native pests and diseases that attack them in their areas of origin (North America, Europe and Asia in the case of *Pinus* and Australia for *Eucalyptus*). (Acta I, Simposio Nacional sobre la Problemática Fitosanitaria Forestal en Chile - 1987)

Chile's geographical isolation, conditioned by the presence of considerable natural barriers such as the Atacama Desert to the north, the high peaks of the Andes Cordillera to the east, the Patagonian ice fields and steppes to the south and the Pacific Ocean to the west, results in Chilean tree plantations being significantly free from the pests which are present in neighboring countries. This geographical isolation has substantially limited the introduction of new pests by natural dispersion.

The germoplasm which has given origin to Chile's Radiata pine and *Eucalyptus* plantations has always been seeds, *in vitro* propagation material or sprigs brought into the country under post-entry plant quarantine procedures, thus minimizing the risk of the introduction of pests. Accordingly, Chile is able to provide an environment particularly conducive to the growth of trees free from pathogens and pests.

DICI 314375 v.2

8

02/06/94

III. CHILE'S FORESTS ARE MANAGED TO PREVENT INFESTATION

A. Establishment and Management of Radiata Pine Forests.

Radiata pine was introduced into Chile more than 100 years ago and has been produced in an extraordinary favorable sanitary condition. ("Protección Forestal en Chile," R. Gara, 1978). Chile's management of its forestry plantations, along with the country's advantageous climatic and soil conditions, has made possible a growth rate of about 20 to 30 cubic meters per hectare/year, one of the highest rates in the world. Sanitary management is integrated in every step of the process in order to produce forest products free from infestation.

1. Production of Improved Seeds Through Genetic Improvement.

In 1976, a cooperative program for genetic improvement was launched by Austral University. The program has led to the development of faster growing forests, as well as improvements to the physical properties of the wood.

At present, the vast majority of the pine plantings in Chile are established with seeds originating from seed orchards, whose sources are the "plus trees," trees that are genetically superior to others of the species. This has resulted in an increase in plantation yields of about 15 percent as compared with the average yield twenty years ago. It also results in plants that

DICI 314375 v.2

9

02/06/94

are more resistant to infestation because the "plus trees" are selected for their strength and health.

2. Production of Plants in Centralized Nurseries.

The sources for new plantings are centralized nurseries with rigorous control of the growth process of seedlings. Special attention is given to the sanitary condition of the plants to be shipped to the site as well as to their nutritional level, in order to ensure health and growth from the moment of their planting. The plants used may originate directly from seeds or from cuttings, whose sources are genetically improved trees.

Before being shipped to the plantation site, the plants must meet minimum requirements with respect to height, diameter, height-diameter ratio, freedom from infestation, root growth and nutritional level. There is also strict compliance with the standards governing the time periods from extraction of the plants to their planting on site and the means of transportation employed, in order to diminish stress on the plants.

3. Planting.

The sites to be planted are prepared to receive the new plants under the best conditions possible. The preparation is tailored to the characteristics of each site, the common processes being subsoiling, harrowing and other soil-preparation work. Great effort is made to use the alternative with the least environmental impact.

The planting is carried out by skilled personnel who are trained to determine the quality and sanitary condition of each plant, and to select planting equipment that ensures the best conditions for plants at their establishment site. The planting density (number of plants per hectare) is defined for each site, in accordance with the quality of the site and the intended productive purpose of the new forest. Generally, this density ranges from 800 to 1600 plants per hectare.

4. Fertilization and Weed Control.

In accordance with the soil characteristics of the site and studies of the efficacy of fertilization, nutrient incorporation programs are established for the pine plantations. Additionally, weed-control programs are carried out to ensure that fertilizers and water are available to the plant rather than to vegetation that could compete with it.

5. Silvicultural Management.

The Chilean forestry firms have developed management patterns which use thinning and pruning activities as well as sanitary inspections to obtain, at the end of the rotation period, high quality products from strong and healthy plants.

Furthermore, the growing concern in the Chilean forestry sector for establishing intensive management patterns, in conjunction with the government policies of conservation and

preservation of soils and native flora and fauna, fosters the maintenance of a healthy and productive forest.

B. Protection Against Pests.

During every stage of the growing and harvesting process, phytosanitary vigilance activities are performed with the object of detecting possible problems. In order to carry out this work, there is coordination between the industry and the State in evaluating the need to implement control actions. With respect to Radiata pine in particular, rotation periods are short and the forest is harvested at a stage where the trees are very healthy (not exceeding a tree age of 30 years), thus, the possibility of the presence of harmful agents is minimized.

1. National Strategy Against Pest Infestation.

In order to protect Chile from new infestations, a national strategy has been established to minimize the risk of the introduction of new pests. The strategy includes the following:

- Application of quarantine requirements to protect entry of forest pests. It should be noted that many major pests such as the gypsy moth (*Lymantria dispar*), the nun moth (*Lymantria monacha*), the wood wasp (*Sirex spp.*), Dutch elm disease (*Ceratocystis ulmi*), the bark beetles of the *Ips* and *Dendroctonus* genera, the chestnut canker (*Endothia parasitica*), the entire *Platypodidae* family, the entire genus *Monochamus* and the entire genus *Bursaphelenchus* are not present in Chile. Thus, there is no

risk of these organisms being introduced into the United States from Chile.

- The establishment of regulations governing the importation of wood, designed to prevent the introduction into the country of quarantine pests which could affect native forests and tree plantations. Resolution N° 1827/94 of August 25, 1994 (Diario Oficial de la Republica de Chile, No. 34940 at 3), specifically establishes quarantine regulations for the entry into Chile of lumber and logs.
- The establishment of regulations governing the entry of wooden packing into Chile, as well as the implementation of a Program of Phytosanitary Inspection of Wooden Packing of Imported Goods.
- The establishment of programs for early detection of pests subject to quarantine requirements, focused on risk areas, through the National Phytosanitary Vigilance Program. At present, in Chile, there are a number of different monitoring networks for quarantine pests in risk areas, which use a variety of detection techniques such as specific pheromone traps (for the detection of *Lymantria dispar* and of bark beetles, among others), light traps, funnel traps, bait trees, Delta traps, etc. Moreover, periodic phytosanitary inspections are carried out in forests in risk areas through sampling stations. The purpose of

these actions is the early and timely detection of new pests in order to quickly eradicate them.

- Lastly, SAG (Servicio Agrícola and Ganadero), the Chilean government agency in charge of preventing and eradicating plant and animal pests, has a national network of 27 taxonomical laboratories in the disciplines of entomology, mycology, virology, bacteriology, nematology and malherbiology which enable timely diagnoses of any pest or pathogen that may be found.

Additionally, there is active participation of other national organizations in the phytosanitary sphere, such as CONAF (Corporación Nacional Forestal), whose efforts are directed mainly toward phytosanitary vigilance of endemic problems, support for forestry research in the phytosanitary sphere and the coordination of the National Forest Health Committee, a coordinating body between the private and public sectors in phytosanitary matters.

Through CONAF, there is a national network of pest identification and diagnosis centers aimed at the detection and identification of endemic pests that may attack the Chilean forest resources. Of major importance is the legal obligation to report to SAG any pest detected or suspected, ensuring a quick and precise diagnoses of any new pests found in Chile. (Decreto Ley N° 3.557 de 1980, Artículo 5°, Diario Oficial de la Republica de Chile, February 9, 1981)

2. Joint Effort by the Private Sector in Phytosanitary Control.

As a result of the growth of the forestry section, the forestry industry created, in 1992, a corporation known as the Controladora de Plagas Forestales S.A., with the goal of protecting the health of the plantations. This corporation is made up of 25 forestry firms with a joint holding of more than 900,000 hectares of Radiata pine plantations (65 percent of the country's total Radiata pine area). Its main mission is to prevent pest outbreaks in the forest resources belonging to its associate companies through the production and purchase of the necessary equipment and the proffer of the necessary services to keep holdings free from forest pests and diseases. The work carried out by this corporation is fundamental to programs for detection, evaluation and control of pathological agents.

Also of major importance is the coordination of industry efforts with the government, with respect to both research and pest control, through the National Forest Health Committee which is supervised by CONAF. In addition, small forest owners receive technical assistance from the Ministry of Agriculture.

This joint effort between the private sector and the government makes it possible to deal with any phytosanitary problems that might develop and to adopt, in an efficient manner, the appropriate measures with the least possible delay. An example is the recent coordinated reaction to the pine shoot moth

(*Rhyaciona buoliana*). Through this effort, it has been possible to biologically eradicate nearly all of the pest (it is now present only in sprouts), in a manner which is non-polluting, permanent and maintains the appropriate balance between the parasites and the pest.

IV. CHILE'S EXPORTS ARE CLOSELY SUPERVISED TO PREVENT ANY SURVIVING INFESTATION FROM BEING EXPORTED

A. Preparing the Wood for Export.

1. Logs.²

Prior to shipment, the logs must have a clean, even cut, perpendicular to the length of the log at each end. The logs could remain in their gathering yard for a maximum of thirty to forty days before they are shipped. The logs are given special sanitary treatments according to the specifications of the buyers and the requirements of the destination market. All logs destined for the United States are debarked and fumigated. SAG inspects the logs and certifies the phytosanitary safety of logs that pass inspection.

2. Radiata Pine Lumber.

a. The Arrival of Logs At the Sawmill.

The logs are unloaded from the trucks which bring them from the forest, and are stored under sprinkling water in order to reduce their temperature and prevent the growth of fungi that can

² Only a very small percentage of Chilean wood is exported to the United States as logs.

stain the wood. Under these conditions, the logs can be stored for a maximum of six months without suffering any deterioration.

b. Sawing of Logs and Stacking of Lumber for Kiln-drying.

The wood is sawn in order to obtain the desired products.

The lumber destined for remanufacturing and for "Shop" and "Moulding" is stacked and kiln-dried wood separators are placed between the layers of lumber in order to allow the flow of air during the kiln-drying process.

c. Drying programs

Nearly all lumber which is exported to the United States is kiln-dried. The kiln-drying occurs at industrial plants. During kiln-drying, the wood is subjected to temperatures greater than 71°C for many hours. The kiln-drying process ends with the humidity content of the wood ranging from 9 to 12 percent. Once the wood comes out of the drying chambers, it is taken to a specially prepared shed to cool. From the point of kiln-drying onward, the treated wood is segregated from other wood.

d. Packing And Transportation.

The kiln-dried wood earmarked for remanufacturing plants is strapped onto and transported on tarpaulined trucks. All treated wood is segregated from other wood during transportation

The wood destined for the United States is packed with the following minimum elements:

Element	Function
Plastic	Completely covers and insulates the wood
Kiln-dried wood blocks	Allows the entry of forklift forks
Metal straps	Secures the bundles
Small kiln-dried boards	Separates the wood bundles

The wood is transported to the shipping port on tarpaulined trucks. Again, treated wood is kept separate from untreated wood.

The phytosanitary inspection of the shipments is performed by SAG, in roofed sheds. The bundles of treated wood are loaded into segregated sealed containers. If the wood successfully passes SAG's inspection, a Phytosanitary Certificate is issued. If the wood does not pass SAG's inspection, the batch is rejected.

The Chilean ports equipped for import and export of goods of vegetal origin, including timber products, are subject to rigorous internal sanitary measures, in accordance with SAG regulations, prominent among them being the following:

- Application of periodic phytosanitary treatments.
- Elimination of wastes, wood residues, cuttings, cardboard and weeds.

- Rejection of entry of dunnage with bark into ocean ports.
- Adoption of applicable technical and practical measures in order to prevent infestations or pests.

Thus, by the time wood products are exported to the United States, they have been carefully protected from infestation at every stage of the process from nursery to embarkation.

V. CHILE'S SUCCESSFUL EXPORT OF LUMBER TO OTHER COUNTRIES AND THE SUCCESSFUL OPERATION OF THE US-CHILE AGREEMENT ON FRUIT AND VEGETABLES ARE TESTAMENTS TO THE STRENGTH OF THE CHILEAN INSPECTION SYSTEM.

Chile is among the countries with the longest-standing phytosanitary traditions in the world. Its first plant quarantine organization was established in 1896, the Estación de Patología Vegetal (plant pathology station), born of the need to protect the country's viticulture from the introduction and establishment of Phylloxera, which had become widespread in Europe and the United States. This station, which stimulated a further broadening of the phytosanitary concept, was the political, administrative and functional antecedent of the present SAG, the official Chilean phytosanitary agency.³

³ Other important Chilean phytosanitary institutions and measures include:

- The Consejo de Agricultura (agricultural council), which operated in conjunction with the above-mentioned Estación de Patología Vegetal, from 1896 to 1924.
- The Ministry of Agriculture, Industries and Colonization which was created in 1924.
- The first Plant Health Law, along with related regulations, which was established in 1925.

(continued...)

The high degree of importance that the State of Chile has given phytosanitary protection throughout its history has made possible a series of important developments and accomplishments in matters of pest control and eradication. Prominent among these are: the eradication from Chile of the South American fruit fly (*Anastrepha fraterculus*) (1964) from Region I; the eradication of the Queensland fly (*Dacus tryoni*) 1975/1976) on Easter Island - Region V; the establishment of a program of detection and biological control, by means of *Orgilus obscurator*, of the pine shoot moth (*Rhyacionia buoliana*), an action carried out by SAG from 1985 to 1992 which has been continued by CONAF in cooperation with the Chilean forestry firms since 1993.

The most important development in recent times is the definitive eradication of the Mediterranean fruit fly (*Ceratitidis*

³(...continued)

- The International Phytosanitary Protection Convention, whose depositary agency is the Food and Agricultural Organization (FAO) -- Chile became one of the first signatories in 1952.
- Law N° 16640, which created SAG in 1967.
- The Corporación Nacional Forestal (CONAF) which was created in 1970, as an institution responsible for promoting, regulating and protecting the country's forest resources.
- Statutory Decree DFL N° 3557, enacted in 1980, which contains: (1) the fundamental law governing SAG's functions concerning plant and animal pests; (2) regulations governing nurseries; (3) provisions covering the import, export and transit of silvoagricultural products; (4) regulations concerning the use of insecticides and fertilizers.

DCT-314375 v.2

20

02/06/96

capitata) (Resolution N°. 3.513/1195, Diario Oficial de la República de Chile, Dec. 13, 1995) and the subsequent recognition of Chile as a medfly free country by the U.S., Japan, the Philippines, China, South Korea and New Zealand, among others. Because Chile has no economically significant forest pests, border controls and prevention are more important in the forest sector than eradication programs.

Chile's favorable phytosanitary condition, excellent national quarantine, detection and diagnosis network, and SAG's internationally recognized reliability, have made possible the exportation of Chilean forest products to many countries including countries with high phytosanitary standards such as Japan, Switzerland, the United Kingdom, Spain, and Italy

Similarly, SAG has established numerous bilateral agreements covering phytosanitary matters, which have been fundamentally oriented to trade in agricultural and forest products, and more recently, external quarantine.⁴

⁴1980. The SAG/USDA (U.S.A.) Cooperative Agreement was established, providing an operating framework for exports of fresh Chilean fruit and vegetables to the United States market.

1987. The opening of the Japanese market for certain types of fresh Chilean fruit.

1988. Additional access granted for Chilean fruit to Japanese market.

1989. A Chile-Philippines Memorandum of Understanding allowing apples, stone fruit, table grapes, citrus fruits (continued...)

DCT-314375 v.2

21

02/06/96

With regard to bilateral agreements, worthy of special mention is the Cooperative Agreement between the United States and Chile, carried out with great success by SAG and USDA/APHIS since 1980. Pursuant to this Agreement, the two agencies work in close coordination to ensure that all fresh fruit and vegetables exported from Chile to the U.S. comply with applicable phytosanitary measures. The Agreement provides for joint SAG/USDA inspection at source and fumigation.

⁴(...continued)
and kiwis produced in Chile to enter the Philippines.

1990. Under the SAG/USDA (U.S.A.) Cooperative Agreement, the entry of Asian pears from Chile into the United States was authorized.

A Phytosanitary Agreement was entered with New Zealand for the entry of Chilean table grapes.

A Memorandum of Understanding was signed with the People's Republic of China, covering broad aspects of plant quarantine and phytosanitary certification.

The governments of Argentina, Brazil, Chile, Paraguay and Uruguay formed and ratified the Regional Plant Health Committee (COSAVE) in the Southern Cone area.

1991. A Phytosanitary Protocol was entered into with Canada for the purpose of promoting and implementing cooperation in the plant quarantine field.

A Memorandum of Understanding was signed with Venezuela, providing for the access of fresh fruit and vegetables from Chile.

1993. Phytosanitary Agreement with Dominican Republic providing for the importation of Chilean Radiata pine lumber.

In addition to the above, other agreements in phytosanitary matters have been established with Argentina, Brazil, Canada and Peru for trade in agroforestry products.

This working agreement constitutes one of the most ambitious actions of its type carried out by the United States anywhere in the world in terms of the diversity of products covered (76 products and 72 plant species) and the volume of the covered products exported to the United States. Before the Agreement was implemented, Chile exported only 5.7 million boxes of fresh fruit and vegetables to the United States a year. As a result of the successful operation of the Cooperative Agreement, exports of fruit and vegetables from Chile bound for the United States now exceed 34 million boxes a year, with a minimum of phytosanitary problems.

VI. TECHNICAL COMMENTS ON THE DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT.

A. Pest Risk Assessment.

The phytophagous organisms mentioned by USDA/APHIS in the document "Pest Risk Assessment of the Importation of *Pinus radiata*, *Nothofagus dombeyi* and *Laurelia philippiana* Logs from Chile" (Misc. Publ. N°1517, 1993) associated with Radiata pine logs and lumber from Chile are insects and fungi which in Chile and elsewhere have not been pests of significance. It is worth noting that some of these pests, such as the wood-staining fungi of the genus *Ophiostoma* (*Ceratocystis*), among them being *O. piceae* and *O. pilifera*, are cosmopolitan organisms which are already present in the United States.

Notwithstanding the above, even if were possible that some of these native or introduced phytophagous agents could cause

environmental harm in the United States, the phytosanitary-risk mitigation measures required by USDA/APHIS (Table 4-7) are highly effective, inasmuch as they establish a rigorous procedure of phytosanitary-risk minimization which takes into account the sanitary condition of the logged forests, quarantine treatments, protective measures during transport, phytosanitary inspection in the destination country, segregation in destination ports and heat treatment of the woods and residues produced, all of which make practically impossible the survival of any potentially harmful phytophagous organism.

B. Heat Treatment or Artificial Drying of Lumber.

In Chapter IV ("Environmental Analysis"), the draft SEIS states, in the third paragraph, that heat treatments of lumber, including kiln-drying, are the only known treatments which are completely effective for the control of all pests, as supported by the references to USDA, APHIS, 1991a and USDA, FS, FPM, 1992b. It should be noted that almost all lumber exported from Chile destined for the United States is subject to kiln-drying even though this is not required by the current regulations. The small amount of lumber that is not kiln-dried is otherwise treated in accordance with existing U.S. regulations, and is subject to heat treatment, under U.S. regulations, after it has been imported to the United States.

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24

(12/06/99)

C. Quarantine of Pests.

It should be noted that the pests liable to be spread by means of logs or sawwood, such as the gypsy moth and the nun moth (*Lymantria dispar* and *Lymantria monacha*), are not present in Chile. Nor are the pine wood nematode (*Bursaphelenchus xylophilus*), the wood wasp (*Sirex noctilio*), the bark beetles of the *Ips* and *Dendroctonus* genuses, and Dutch elm disease (*Ceratocystis ulmi*), among many others. Thus, there is no risk of introduction of these pests into the United States from Chile.

D. Phytosanitary Risk Management Alternatives.

In the draft SEIS, six phytosanitary-risk mitigation alternatives are set forth (and as stated above, described in a manner conducive to public participation in the decision-making process):

Alternative 1: No action;

Alternative 2: Wood Import Regulations (Preferred alternative);

Alternative 3: Prohibit importation of untreated wood, except packing materials;

Alternative 4: Prohibit importation of untreated wood;

Alternative 5: Prohibit importation of unmanufactured wood except packing materials;

Alternative 6: Prohibit importation of unmanufactured wood.

10471314375 v.2

25

(12/06/99)

Of these alternatives, alternatives 3, 4, 5 and 6 appear to be contrary to the World Trade Organization agreements, because these measures are not rationally related to the risk assessment. (Articles 2.2 & 5.2 of the SPS Agreement; EC Measures Concerning Meat and Meat Products (Hormones), Report of the Appellate Body, WTO Docs. WT/DS26/AB/R and WT/DS48/AB/B (Jan. 16, 1998))

VI. FINAL CONSIDERATIONS

In conclusion, the Chilean government and the Chilean forestry industry wishes to reiterate the following points:

- The Chilean forestry sector, which is dependent on exports, is of utmost importance to the country's economy, as demonstrated by its 12 percent share of the country's total exports and 2.6 percent share of GDP ("Exportaciones Forestales Chilenas," Instituto Forestal, 1996);
- The United States' market is a significant one for the Chilean forestry sector. It is the country's second largest destination market today, and is believed to have great future growth potential. Moreover, aside from benefits to the Chilean forest industry, the United States manufacturing industry benefits from Chilean wood imports because it is able to satisfy its wood requirements with products of high quality and sanitary conditions thereby preserving U.S. forests;

- The growth of Chilean forestry is based almost exclusively on tree crops grown on plantations, with intensive, high-tech management to ensure the production of strong and healthy trees;
- Chile enjoys excellent sanitary conditions with virtually no forest pests present;
- The phytosanitary work on the part of the Chilean public sector is recognized the world over and, in conjunction with the efforts of the private sector, fully guarantees protection of forest health.
- When U.S. import restrictions on Chilean wood are in effect, such as the current restrictions imposed by the court-ordered injunction, considerable harm is done to the Chilean forest sector economy which, because of its importance, extends to Chile's national economy. If such a measure was imposed on a permanent basis, there would inevitably be lower future growth (and potential decline of) Chilean exports to the United States, a lower level of U.S. and other investment in the Chilean forestry sector and, consequently, lower growth in Chilean employment and production in the forestry sector;

- Given Chile's virtually pest-free natural state, and the abundance of protective measures implemented by both the private and public sector, there would be no significant adverse environmental impact in the United States from the importation of Chilean wood.

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41

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February 10, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy & Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: **Importation of Logs, Lumber and Unmanufactured Wood Articles --
APHIS Draft SEIS**

Dear Mr. Edmundson:

On behalf of Terranova Forest Products, Inc. ("Terranova") of Bellevue, Washington, I am writing to comment on the Draft Supplement to the Environmental Impact Statement ("Draft SEIS") regarding regulations on the "Importation of Logs, Lumber and Other Unmanufactured Wood Articles." 7 C.F.R. § 319.40

Terranova is an importer of manufactured wood articles from Chile. Although the scope of the Draft SEIS is limited to unmanufactured wood articles, and therefore does not directly affect Terranova's business, Terranova wishes to provide information which may be of assistance to APHIS in evaluating the Draft SEIS. Terranova is well acquainted with the Chilean forest products industry and with Servicio Agrícola y Ganadero (SAG), which is the government agency in Chile responsible for animal and plant health inspections.

In Terranova's experience, exporters of Chilean forest products are generally serious about developing international markets for their products and, in their planning, take a long-term view. Heavy investments have been made in Chile, including investment in technology, to ensure that Chile's forestry operations and manufacturing processes produce products of the highest quality. Chilean exporters realize that development of international markets, including U.S. markets, requires maintaining high standards of quality and full compliance with applicable laws for the protection of the destination country's environment. U.S. concerns about exotic pest infestation are well known in the Chilean forest products industry. In Chile, it is generally

2

Mr. Jack P. Edmundson
February 10, 1998
Page 2

recognized that elimination of the risk of such infestation is in the best interest, not only of the U.S. environment, but also of the Chilean forest products industry.

SAG is the Chilean equivalent of APHIS. It enjoys an excellent international reputation. commanding the respect of the forest products industry and of government agencies in other nations. SAG's Pest Control Bureau has a well educated professional staff and is well equipped technologically. One of its important functions is to ensure that forest products exported from Chile comply with phytosanitary requirements in the country of destination. Its prevention programs are known to be highly efficient.

Terranova agrees with the conclusion of the Draft SEIS, at page 4, that "import restrictions [should] obstruct trade as little as possible while still fulfilling their purpose of protecting U.S. natural resources from the risk of plant pest introductions." The preferred alternative (existing regulations) errs, if anything, on the side of caution for the protection of the U.S. environment, insofar as Chilean wood products are concerned. In particular, Chilean wood products are classified with wood products from other countries which appear to pose a greater risk to the U.S. environment. The Draft SEIS, at page 51, lists "plant pests which may present the most risk of introduction from imports of logs, lumber and other unmanufactured wood articles" Although the Draft SEIS bases its list on the U.S. Forest Service's pest risk assessments for Siberia and the Soviet Far East, New Zealand and Chile, all of the pests listed in the Draft SEIS, at page 51, are identified as having their origin in Siberia or New Zealand.

This analysis demonstrates that Chilean wood products present less risk of exotic pest introduction than comparable wood products from Siberia or New Zealand. In any case, heat treatment, which is required for all Chilean logs, lumber and other unmanufactured wood articles after entering the United States, is acknowledged to be one hundred percent effective in eliminating the risk of pest infestation. See Draft SEIS, at pages 19, 26 and 31.

We appreciate the opportunity to comment on the Draft SEIS. Terranova urges APHIS to complete the NEPA process as expeditiously as possible, so that the injunction imposed by the federal district court in *Oregon Natural Resources Council v. APHIS*, Civil No. 95-4066-CW (No. Dist. of Cal., Feb. 27, 1997) may be lifted and that normal trade relations between the United States and its trading partners may resume.

Mr. Jack P. Edmundson
February 10, 1998
Page 3

Very truly yours,

~~SCHWABE, WILLIAMSON & WYATT, P.C.~~

By: Dennis A. Ostgard

cc: Terranova Forest Products, Inc.
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February 9, 1998

Dear Mr. Edmundson,

We are writing in regards to SEIS for the "Importation of Logs, Lumber and Other Unmanufactured Wood Articles", December 1997. Attached are the comments for the previous draft which we could not find consideration for in the current document. Please incorporate our comments into the record.

The current SEIS appears to adequately address the requirement of the recent court ruling against APHIS. However, we feel that the document should contain empirical evidence regarding the efficacy of existing protocols for logs from New Zealand.

As per the attached from the Ministry of Forestry in New Zealand: 277,000 cu. mtrs. of logs have been imported into the USA since 1992. Based on the estimated average log size of 1.097 cu. mtrs./piece, approximately 252,000 pieces were imported. APHIS is required to inspect approximately 2.5% of all pieces. At that rate around 6,300 pieces (aka logs) have been inspected from 1992 to 1997. It is our understanding that no quarantinable pests have been detected.

Based on this information it would seem empirically evident that the current efficacy standards are adequate or possibly too stringent. We again urge APHIS to consider eliminating the requirement of fumigation.

Please consider our comments and we appreciate the efforts of APHIS to exclude unwanted pests into the United States.

Sincerely,
Schmidbauer Lumber Inc.

Mark Anderson
Mark Anderson
Resource Procurement

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2/12/98

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Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Programs Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson

The following are my comments, observations and questions regarding the Draft Supplement to the Environmental Impact Statement, (hereafter referred to as SEIS) on the Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, as well as other related documents

I believe that the current and proposed regulatory and mitigation requirements regarding the importation of logs, lumber and other unmanufactured wood products are inadequate to protect the many forest and non-forest resources of the U.S. and North America

Each Pest Risk Assessment (hereafter referred to as PRA) concentrated their analysis on a very limited number of pests, and to a certain extent, "built" the mitigation requirements with the intent of preventing the establishment of that very limited number of pests in the U.S. There is a paucity of information on pests and what role they may play when moved to a new environment. In the PRA for Chile, there are some statements that exemplify this, "it is not reasonable to limit the assessment to organisms that are known to be associated with trees. As for potential pathogens, I would estimate that for each one known there are more than ten unknowns" (Cobb, Chilean PRA, 1993, page 240, paragraph three) and "History has taught us that it is impossible to predict accurately which organisms could become pests" (Hilburn, Griesbach, Johnson, Wright, Chilean PRA, 1993, page 239, paragraph seven). By requiring mitigation techniques that are effective for a small known group of organisms, we are liable to be affected by an unknown organism, or a known organism which reacts to a new environment in an unpredicted way.

"For most pests, the mitigation measures are redundant from step to step, providing multiple opportunities to use known effective measures to eradicate pests, thus further reducing the chance of pest survival. By the time all steps are completed, even though some uncertainty remains, the probability of a live pest being present, escaping, and establishing a reproducing population in the United States is negligible because of the mitigation measures and the sequence in which they are applied" (SEIS, page 26, paragraph two). This seems to contradict the statement "In its February 27, 1997, order the court found that the FIS "assumes without examination that individually ineffective control measures will be effective collectively" (SEIS, page 15, paragraph five). I do not see any examination, or studies cited demonstrating that the mitigation measures collectively applied, are proven to be effective.

Various pests, including flying insects, have survived all mitigation treatments and have arrived in this country, indicating that the treatments, cumulatively, were not effective.

For the inspection process to “have teeth” it would seem likely that wood commodities that did not meet import requirements would have been refused entry, or the offending articles destroyed, as is specified in “Point 1-Efficacy of Combinations of Methods, (3) if the risk of pest introduction could not be mitigated, the inspector refused entry of the wood commodity in the country, or (4) if the risk of pest introduction could not be mitigated, the inspector could have the infested articles destroyed on site.” (SEIS, page 20, paragraph one) I would like to know how many times an inspector actually refused entry of wood articles, and what happened to those articles, and how many times have infested articles been destroyed on site? Destroying articles on site is frequently in conflict with other environmental regulations as promulgated by DEQ, EPA, etc.

In the DEIS, addressing the level of pest risk reduction, it states that to “Conduct comprehensive inspection of logs” will reduce the “Level of Pest Risk” by “Some” (DEIS, page 24, Table 4-2) This will be true only for those logs which are visible, and which are actually inspected. I would hypothesize that only a very small percentage of logs are visually inspected. APHIS seems to realize the limitations of inspection. “For large shipments, it is virtually impossible to carefully examine every wood article for potential plant pests” (SEIS, page 13, paragraph two) If a procedure such as visual inspection can not be depended upon to reduce the chance of exotic pest introductions for every piece of material in all imported wood product shipments, then perhaps it should not be considered a mitigation technique. Would fumigation still be considered a mitigation procedure if 20% of the logs in a shipment intended for fumigation weren’t actually fumigated?

Reliance on the use of methyl bromide must be reduced, as methyl bromide production and importation will be eliminated by January 1, 2001, and “Unlike the Montreal Protocol, there are no exemptions for phytosanitary uses under the CCA. Therefore, methyl bromide use in the United States for any purpose will be reduced to zero as supplies dwindle after January 1, 2001.” (SEIS, page 74, paragraph three) Fortunately, there are other mitigation measures that are effective on all known pest species.

Heat treatment is effective for all known pest species. “Heat treatment (either to raise and maintain the internal temperature of the wood to 71 °C for a minimum of 75 minutes or to kiln dry in accordance with the Dry Kiln Operator’s manual) is the only treatment acknowledged to be effective against all pests.” (USDA, APHIS, 1991a and USDA, FS, FPM, 1992b) Also, heat treatment minimally affects the quality of wood “Generally, temperatures up to 82 °C (180 °F) for periods up to 1 hour do not appreciably affect the properties of wood.” (Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, Environmental Impact Statement, 1994, (hereafter referred to as EIS) page 33, paragraph two.) Heat treatment is the only known effective mitigation technique that works on all known pest species. I contend that we simply can’t afford any treatment less effective than heat treatment.

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Early detection of health problems are more likely to occur in agricultural crops than in forests. There are several reasons for this: 1. The lack of near daily attention given to forests compared to agricultural crops, due partly to the remoteness of many forests, 2. The size of trees limits the view of much of the tree, and 3. Trees, being large, do not change appearance rapidly. When a tree’s appearance changes markedly, it usually has been sick or dead for some time. Early detection of pest populations is far less likely in forests than in agricultural crops and therefore pest populations are more likely to have established large populations over a larger area before detection occurs. This makes eradication difficult or impossible. APHIS realizes the difficulty in eradication: “While it is possible that damage could be limited (at additional cost) by instituting an eradication program, eradication is deemed unlikely based on the fact that no known established forest pest defoliators have ever been eradicated.” (DEIS, page 12, paragraph one) Has any forest pest, once established, been eradicated? The difficulty of eradication makes it imperative that the regulations and mitigation procedures are stringent and do not err on the side of leniency, as many people feel the current rules do.

Ignorance of economic reality is demonstrated by the statement: “Any private costs of eradication efforts would ultimately be passed along to the consumer as part of the cost of the product” (EIS, page 59, paragraph four) This statement would be true only in a monopolistic pricing system, and the last time I checked the market for wood products was certainly not of that nature. (My degree in economics may be showing here) The market is what sets the price, and the world is full of examples of businesses that believed they could “pass on the costs.” Some of them survived their folly, many didn’t. This belief in the ability to automatically “pass on costs” is actually a throwback to Karl Marx’s “labor theory of value.” It made no sense when Marx dreamed it up, and certainly is not relevant today. Eradication expenses will reduce the profit, or increase the loss, of those who undertake eradication efforts. In the long run the supply of the products may be reduced by pests, causing changes in the demand/supply relationship, and therefore could result in an increase in price. In the short run, a pest infestation could cause many landowners, both public and private, to increase timber harvesting and cause a severe drop in log prices.

“All cargo is quarantined until the status of the organism can be determined.” (SEIS, page 36, paragraph one) I believe this statement to be totally incorrect. In my conversations with people that have performed inspections of imported logs, samples of unknown fungi were taken so that they could be grown in the laboratory and possibly identified by their spores. There was a very significant time period for this culturing and identification process in the order of weeks. I asked what happened to the log shipment. Their reply was something like “we let the logs go and hoped for the best”, meaning they hoped no pest species was released. I also strongly disagree with the statement “APHIS’ experience, during the short period that the wood import regulations have been in effect, indicates that they have successfully prevented quarantined pests from entering the United States.” (SEIS, page 42, paragraph three) These regulations have been in effect for only several years. As a result of pests various life cycles, reproductive rates,

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detection difficulty, and forests remoteness, it is not certain if we have quarantined pests building populations to dangerous levels. After all, a beetle that drills large holes in trees in one of the most densely populated residential neighborhoods in the U.S. (Asian Long-horned Beetle in Brooklyn) took perhaps three years to detect.

I have visited and toured several sawmills, and believe the requirement that all wood waste from imported unmanufactured wood products, including sawdust, be treated or destroyed according to APHIS regulations, is not being fulfilled in many cases. The problem is not due to negligence or facilities not wishing to comply, but a result of the huge amounts of material handled and the small pieces of material that fall off, or are knocked off of loads. Also, when cutting occurs, sawdust ends up going everywhere. It gets transported on belts and chains, on workers gloves, clothing, shoes, etc. Eventually, some sawdust or perhaps a loose knot containing a pest will fall out of a board and get to an area where it won't be treated. One thing is certain: imported sawdust looks like other sawdust! Separation of all by-products of the milling process is not possible; some will escape treatment. Allowing imported unmanufactured wood products to arrive in this country, to be transported to numerous destinations, and then allowing up to 60 days before final treatment is required, seems totally ludicrous. Mitigation measures should be completed in the country of origin with a treatment that is effective at killing all pests to the core of that product. Re-infestation must be prevented.

An irony of this imported wood issue is that many of the importers own no forest land. If a pest comes in on wood they imported, it will not severely affect them, and yet they benefit from the importation. A heads you lose, tails I win kind of situation! The stakes are simply too high to play such a foolish game. The resources of forestry, agriculture, horticulture, watersheds, recreation, tourism and wildlife could be severely impacted by a pest that is imported because of insufficient mitigation requirements.

I urge APHIS to require all imported unmanufactured wood products (from other than the adjacent states of Mexico and from Canada) to be heat treated so those products core temperature is 71 °C for a minimum of 75 minutes, or to be kiln dried in accordance with the Dry Kiln Operator's Manual. Treatment should occur either in the originating country or in the ship while in transit. The protection of the resources of the United States makes this a reasonable requirement.

Sincerely,



Terry Lamers
Forestry Consultant
3985 Kings Valley Highway
Dallas, Oregon 97338
(503) 623-6979

Pest: MANUKO 2/6



Klamath Forest Alliance
P.O. Box 820 Etna, California 96027
Ph: 530-467-5405 Fax: 530-467-3130 E-Mail: klamath@sisqtel.net

Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development
APHIS
4700 River Road, Unit 143
Riverdale, MD 20737-1238

5 February 1998

Dear Mr. Edmundson:

I am writing in response to the recently released DSEIS by the APHIS concerning importation of logs, lumber, and other unprocessed wood. As a representative of the Klamath Forest Alliance, I feel that this draft does not adequately address the weaknesses of the original EIS, and that regulations on wood importation should be strengthened in general. I urge the APHIS to complete a more complete EIS, and to integrate regulations which thoroughly protect our forests from the dangers of wood importation.

In the 1930s, log imports introduced a fungus that has since killed 75% of Dutch elms in the Northeast United States. Many kinds of pests and diseases can travel to the US on logs or other unmanufactured wood that is imported, but current regulations do not adequately address these dangers. It is imminent that the APHIS consider the expense that infestations can generate and have generated, and that they create guidelines that protect against their occurrence.

The proposed DSEIS is not sufficient for acceptance. Please rewrite it so it adequately prevents the importation of dangerous pests with unmanufactured wood.

Sincerely,



Adrienne Reed Storey
Klamath Forest Alliance

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George Wooten
PO Box 1099
Winthrop, WA 98862

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
APHIS
4700 River Road, Unit 149, Riverdale, MD 20737-1238

Dear Mr. Edmundson

I would like to comment on the DSEIS that APHIS issued to control importation of unmanufactured wood products.

The DSEIS that APHIS issued to control importation of unmanufactured wood products fails to rectify the weaknesses in the earlier EIS, nor does it adequately address new information. APHIS should strengthen its regulations, not weaken them.

The court lawsuit which resulted in halting the issuance of new permits under the old regulations until a new environmental impact statement was completed found that the original EIS had three flaws: 1) it assumed that individual measures that are ineffective individually will be effective when applied collectively; 2) it omits important factual information concerning uncertainties in risk assessments, control measures, compliance, and human health impacts of pesticides used in eradication efforts; 3) it provides an inadequate comparison of alternatives.

APHIS' needs to prepare a newer, more complete DSEIS to be in line with the court's findings.

The maintenance of effective barriers to irreversible pest invasions should be of a higher priority than what would be allowed to occur, if the EIS was to go forward.

The future ecological health of our forests depends on APHIS maintaining an effective barrier to the introduction of new pests in the face of the danger presented by expanding trade.

Sincerely,

George Wooten
George Wooten

DEPARTMENT OF BOTANY
AND PLANT PATHOLOGY

5 February 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development APHIS
USDA
4700 River Rd., Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

I write to comment on the DRAFT SUPPLEMENT TO THE ENVIRONMENTAL IMPACT STATEMENT, DECEMBER, 1997.

I have two principal criticisms:

1. The Draft Supplement, like the original Environmental Impact Statement, is seriously flawed; and
2. APHIS lacks the will, the technical expertise, the finances, the personnel, and the legal sanctions to enforce it.

Dr. Jeffrey Stone, in his letter to you, dated 6 January 1998, has done an excellent job of identifying the flaws in the Draft. Among these, he points out (his section 3), as have many others, that those organisms which represent the greatest threat are those which cause few symptoms, or none, on their native hosts in the country of origin. Thus the proposed strategy, based on a hazard analysis of known organisms, is of no merit in intercepting the most dangerous threats. This is a key issue, one which vitiates any presumption of control by inspection.

In respect to the importation of logs, the sheer volume of wood in a log ship, combined with the fact that many of the most dangerous fungi can pass undetected in the interior of a log, preclude the reliance on any control short of a complete ban. Many other countries, including several that export their logs to us, have already recognized this fact and have instituted an appropriate ban. The failure of APHIS to insist on such a ban is, in my opinion, clear evidence of malfeasance.

Sincerely,

William C. Denison
William C. Denison,
Assoc. Prof. Emeritus

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Corollas Hall 2082
Corollas Hall 2082
202 734 1452

of new pests.

expending
trade at the expense
of our native priests
is short sighted and
dangerous.

is short-necked and
dangerous.

I want a more complete ETS with

a comparison of alternatives and a true assessment of the value to not make the

friends, but also humane
 friends.
 sincerely,
 Eddie Prine
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Carrie Krizan

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11 ⁽⁴³⁾ PHS must strengthen its 1-31-98

regulations. Prepare a more complete EIS. The future ecological health of our forests depends on APHIS mandating an effective barrier to the introduction of new pests in the face of the danger presented by expanding trade.

You must do a better job of protecting ~~the~~^{our} ~~rights~~^{immigration}.

Jan + Nov 1911

3 February, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development
APHIS

4700 River Road, Unit 149
Riverdale, MD 20737-1238

Re: Draft Supplemental Environmental Impact Statement on
Importation of Logs, Lumber, and Other Unmanufactured
Wood Articles

Dear Mr. Edmundson:

The Western Ancient Forest Campaign (WAF) and Defenders of Wildlife (Defenders) appreciate this opportunity to comment on the Draft Supplemental Environmental Impact Statement (DSEIS) on Importation of Logs, Lumber, and Other Unmanufactured Wood Articles.

Unfortunately, numerous deficiencies remain in the DSEIS. The most important is that the Animal and Plant Health Inspection Service (APHIS) gives every indication that it is disregarding the National Environmental Policy Act (NEPA) process. Rather than proceeding with an open mind as to the question of whether it may decide to amend its regulations, APHIS is treating the DSEIS as a way to ratify pre-determined decisions.

One such pre-determined decision is to amend the regulations as regards wood packing materials. A decision to do so has been reported to us by APHIS personnel. However, despite the fact that phytosanitary regulations governing wood packing materials are explicitly one of the subjects of the present DSEIS, there is no mention of APHIS' planned changes in the DSEIS. In fact, WAF has been told that APHIS plans to delay amendment of the regulations until the lawsuit mandating preparation of the DSEIS is resolved. How can APHIS justify not seeking public input on its rationale and proposal re: this segment of its regulations? Or does APHIS plan to issue a separate DEIS evaluating the need to amend regulations governing wood packing material?

A second apparently pre-determined decision is APHIS' lack of explicit response to the requests made by organizations participating in the scoping process that APHIS consider amending its regulations -- as they concern both wood packing materials and other aspects. The DSEIS contains the same alternatives, indeed the same preferred alternative, as the earlier, flawed EIS. The agency's time line, given on p. 4 of the DSEIS, makes no provision for amending the regulations.

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Since -- as the court determined -- APHIS did not evaluate adequately the environmental impacts of its policies in the earlier EIS, APHIS must utilize the current NEPA process to analyze -- objectively and without a preconceived idea of the outcome -- both previously available and new information. Yet the DSEIS makes no mention of directly relevant information, e.g., agency preparation of revisions to the regulations and of a risk assessment for imports of raw wood from Mexican states that are not contiguous to our common border. These omissions directly flout the court's criticism of APHIS for omitting relevant information in the earlier Environmental Impact Statement.

WAFAC believes that such a full analysis of environmental impacts will justify amendment of the existing regulations. However, this decision should be made after APHIS issues a complete and objective supplemental DEIS and receives and analyzes the comments on it.

A third major flaw in the DSEIS is APHIS' failure to discuss information that counters the agency's stance. Scientists with expertise equal to or greater than that of the agency's personnel have repeatedly challenged APHIS' chosen position, but APHIS does not acknowledge those experts' criticisms or explain why it has rejected them. For example, Dr. Jeffrey Stone has photographic evidence that stain fungi in Chilean logs have survived fumigation with methyl bromide, yet APHIS continues to rank that treatment as "Extensive reduction (95 percent or more)". Instead, the DSEIS attempts to justify the positions taken earlier by reiterating, in somewhat greater detail, the often flawed stances and assertions of the earlier, rejected EIS -- and, by implication, the flawed regulations based on these inadequate assertions.

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APHIS' principal mandate is to prevent introduction of potentially harmful alien pests. Yet APHIS misguidedly focuses on facilitating trade -- even at the expense of reduced effectiveness of its phytosanitary measures. This stance is particularly alarming because the risk of damaging invasive alien organisms reaching our shores on log and other raw wood imports is growing. APHIS expects imports of logs or minimally processed wood to increase when the legal challenge that forced preparation of the DSEIS is resolved. Imports of a vast variety of other products contained in raw-wood packing materials are also likely to increase. WAFAC believes that the DSEIS fails to describe adequately the full range of either the dangers or the measures that could be utilized to minimize the risks. Perhaps because of the incomplete analysis in the original EIS and the DSEIS, APHIS then fails to propose the most effective phytosanitary measures.

In requiring APHIS to prepare a new DSEIS, the court found that the original EIS was deficient in three broad areas:

- 1) it assumed that measures that are ineffective individually will be effective collectively;
- 2) it omitted important factual information re: uncertainties in risk assessments, control measures, compliance, and human health impacts of pesticides used in eradication efforts;
- 3) it provided an inadequate comparison of alternatives.

These same flaws persist in the DSEIS.

The DSEIS not only fails to present convincing evidence that two or more measures might work together to overcome each measure's inherent weaknesses. Worse, it ignores the likelihood that a weakness in some measures will undercut the effectiveness of another measure. This error is most apparent in the discussion of heat treatment.

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Heat treatment is almost universally regarded as the most effective means of killing all types of pests. However, heat treatment kills only those pests present in the wood at the time of treatment. The measure's effectiveness in preventing introduction of pests into the United States is completely dependent on the treated wood's storage and handling between the time of treatment and its arrival here. If the wood is not kept strictly sealed so as to prevent access by any lifehistory stage of insects, fungi, and disease pathogens, the wood can become reinfested. Creating such a penetration-proof barrier is difficult in itself. Verifying effective compliance once the wood reaches our borders is *extremely* difficult. Real pest infestations may result from fraudulent claims of non-performed measures or innocent mistakes -- even if either happens in a low percentage of shipments. Detecting errors -- of whatever cause -- requires both a level of inspection that APHIS agrees (see below) is beyond its capacity and considerable luck. In the DSEIS, APHIS must discuss more objectively the many ways that weaknesses in post-treatment handling, compliance, and inspection interact to reduce the practical effectiveness of heat treatment below the ranking it assigns of "Total (100 percent or nearly 100 percent) reduction of pest risk expected".

It is equally misleading for APHIS to describe heat treatment by the U.S. processor as providing "Total (100 percent or nearly 100 percent) reduction of pest risk expected". Once again, other provisions of the preferred alternative undermine that treatment's effectiveness. APHIS allows importers to delay for a considerable period after importation -- 30 days for raw lumber and wood chips, 60 days for logs -- before either heat treating or processing the articles. While the logs or lumber must have been fumigated prior to importation, Dr. Jeffrey Stone of Oregon State University, APHIS, and other experts agree that fumigation is effective only against superficial pests, not those deep within the wood. According to Dr. Stone, the 60-day lag period is sufficient for insects and fungi surviving in the interior of the logs to emerge to the surface and escape. The 30-day delay for lumber and wood chips is long enough to allow incubation and maturation of both insect and fungal pests. Heat treatment after such a delay will be completely ineffective against any pests that have already escaped.

The court also criticized the original EIS for its inadequate treatment of uncertainties re: importers' compliance with the regulations. The DSEIS has not rectified this problem, either -- despite its also having been raised by WAFEC and other commenters during the scoping process. Our concerns have been further substantiated by a recent study by Agriculture Canada¹ that documents the likelihood that Chinese -- and possibly other -- exporters often fail to comply with the regulatory requirements re: debarking of wood packing material. The Dawson study was presented in September, so this information was available to APHIS when it prepared the DSEIS. The specific infestation that stimulated the Canadian study -- that of Asian long-horn beetle (*Anoplophora glabripennis*) -- has been the subject of APHIS-led eradication and monitoring programs and of several alerts sent to state departments of agriculture. Nevertheless, the DSEIS inexplicably contains no mention of this compliance problem, or any discussion of what questions it raises about APHIS' existing regulations or what APHIS proposes to do about it. (WAFEC presumes that the Asian long-horn beetle infestations have helped to stimulate APHIS' plan to propose amendments to its regulations governing wood packing material; as already noted, the DSEIS does not reveal or discuss this plan.)

¹Dawson, J.L.M., J.D. Bell, E.A. Allen, and L.M. Humble, 1997. Exotic insect interceptions from wooden dunnage and packing material. Presented at the North American Plant Protection Organization, November 1997.

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In December 1997, Victor C. Mastro of APHIS' Otis Plant Protection Center in Massachusetts alerted APHIS headquarters staff to a recent letter from the United Kingdom concerning "dramatically increased" interceptions of a major pest, the spruce beetle *Ips typographus*; the beetle is suspected of entering the United Kingdom on poorly debarked wooden packing materials from the Baltic States. This same beetle has been detected at Great Lakes ports several times. Although Mr. Mastro's letter is too recent to have been incorporated into the DSEIS, it buttresses concerns about the dangers associated with inadequate compliance and verification. The British experience also supports the concerns raised by the Pacific Environment and Resources Center about the validity of certifications issued by Russia and other countries experiencing political chaos.

The court further faulted APHIS for inadequate treatment of risks from unknown pests in the DSEIS. Again, the DSEIS does not address this problem in a straightforward way. On pp. 29-31, APHIS admits the high level of uncertainty regarding risks associated with unknown pests. APHIS states that it does not equate this uncertainty with "low risk". Agency practice appears to contradict this statement, however. In the hazard risk assessment form, contained in Appendix C of the DSEIS, APHIS staff are instructed to place in the "low risk" category species in which uncertainty surrounds crucial factors; among them are

- species with a high risk of establishment but for which the likelihood of their being a pest is "unknown, not enough information available to make a choice."
- a taxon that cannot be identified to species level but that has a high likelihood of establishment and an unknown potential to harm agriculture.

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Furthermore, it appears probable that the tables on pages 23 - 27 that purport to summarize the efficacy of various treatments don't address their effectiveness on unknown as opposed to known pests. This limited coverage is most clearly seen in Table 4-1, but we believe it also affects Table 4-4. Yet APHIS nowhere states these limits or examines the lack of information about unknown pests and, consequently, the questions regarding effectiveness of the various treatment measures against such unknown pests.

One purpose of preparing a supplemental EIS is to update analyses based on new information. APHIS has failed to do so. For example, given the findings in the Chilean risk assessment² and the 1997 study by Dawson *et al.*, APHIS should downgrade the effectiveness rating of debarking. These studies clearly show that debarking can be described as only partially effective in eliminating the risk from surface insects and pathogens. A rating of "Extensive reduction (95 percent or more)" is not supported by the evidence.

²United States Department of Agriculture, Forest Service, 1993. Pest Risk Assessment of the Importation of *Pinus radiata*, *Nothofagus dombyi*, and *Laurelia philippiana*. Logs from Chile. Miscellaneous Publication No. 1517. September 1993. 248 pages.

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Sources agree that APHIS' inspectors, despite their dedication and expertise, will experience great difficulty in detecting pests in shipments containing raw wood. The U.S. General Accounting Office³ criticized APHIS' overall inspection program. The GAO notes the inherent difficulty in detecting tiny insects or fungi in the rapidly growing number of shipments -- now approaching 2 million -- entering our country every year. The GAO notes further that pressure to process these shipments promptly makes the task more difficult. The GAO found that, although APHIS has hired 44% more port inspectors since 1990, there are not enough staff to carry out careful inspections of each shipment in a timely manner. APHIS must also inspect the many facilities licensed to process the imported logs, lumber, and chips. Dr. Jeffrey Stone considers the magnitude of the inspection task so formidable as to favor alien organisms' escaping detection. "Inspection is likely only to identify those shipments of commodities where incidence of pest organisms is exceptionally high. Commodities bearing cryptic or low incidence of pest organisms are practically assured to go undetected." The time required to carry out an inspection, in Dr. Stone's view, in itself provides opportunity for any pests to emerge, spread, and reproduce.

APHIS acknowledges dangers in relying on an inspection strategy and calls for an integrated program. Nevertheless, APHIS relies heavily on inspectors. Inspection is a major part of the "strategy" to prevent introduction of pests in shipments of wood chips; inspectors are expected to determine that the chips are "free from rot".⁴ Visual inspection of a small sample of a full shipload of chips cannot establish true absence of fungal pests, which are literally invisible at stages of their life cycle. Furthermore, we share Dr. Stone's concern about the implications of false assumptions or mistaken judgements made in the process of determining whether a pest is "actionable", particularly but not limited to the problems with the risk hazard assessment form discussed above.

As noted above, the court also found that the EIS provided an inadequate comparison of alternatives. This flaw, too, persists in the DSEIS.

APHIS sets up a false dichotomy between the existing regulations and an absence of regulations, without consideration of other alternative that would provide greater protection than the existing regulations. The DSEIS provides no real description of the burdens and benefits associated with the separate alternatives, or, in particular, the reason why APHIS rejected option 6, the most protective alternative. Numerous experts have documented the actual and potential economic and ecological damage caused by invasive alien pests of our forests. WAFIC believes that this damage is more than sufficient to justify imposition of stringent regulations that would provide the greatest protection against introduction of additional pests.

³United States General Accounting Office. Report to Congressional Committees. Agricultural Inspection: Improvements Needed to Minimize Threat of Foreign Pests and Diseases. May 1997. GAO/RCED-97-102.

⁴On a related matter, WAFIC believes that the standard is unacceptable *per se* because it allows 2% by weight of the regulated articles to "show visual evidence of fructification of fungi or growth of other organisms that cause decay and the breakdown of cell walls ..."

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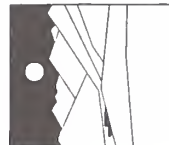
The DSEIS presents a matrix on p. 60 that purports to display the relative efficacy of alternative regulatory regimes or treatments. However, this matrix has not been corrected to reflect deficiencies identified in the EIS on which it is based. Furthermore, the matrix provides only "a relative ranking," it is "not a quantitative measure of risk" and does not even use equal scales (p. 58). In its current form, then, the matrix is not usable as a tool for evaluating the differences among various alternatives

The inadequacies in the comparison of alternatives are fully illustrated by the economic analysis. The economic analysis does not include such key factors as the economic benefits gained from effective pest exclusion or an adequate discussion of the costs when exclusion fails. Nor does the economic analysis evaluate the incremental economic costs and benefits among the alternative treatment methods and proposed rules. Thus, the analysis falls far short of that required to contribute to an appropriate environmental impact statement. Furthermore, there is reason to believe that preparation of a complete economic analysis would yield a different result. History shows that an established alien pest can impose extremely high costs in lost timber productivity and mitigation efforts. To cite just one example, efforts to slow the spread of white pine blister rust (*Cronartium ribicola*) or to breed resistant trees have cost the USDA Forest Service well in excess of \$100 million. The Siberian risk assessment estimated the economic costs of introduction of various pests from Siberia, primarily the Asian gypsy moth, at between \$24.9 million and \$58 billion⁵. Thus, a complete economic analysis may well find that the increased effectiveness of more stringent regulations is more rather than less cost effective.

Another major failing of the DSEIS is its completely inadequate discussion of several issues raised during the scoping process. Among these issues are

- * the threat posed by pests imported on various raw wood articles to forests in the East, South, and Great Lakes region.
- * the threat posed by pests imported on wood packing materials. As noted above, these threats have been highlighted by U.S. and Canadian detections of *Anoplophora glabripennis* infestations and the British interceptions of *Ips typographus*.
- * the risk of introducing pests and pathogens from Mexico. Scientists have noted the possibility that the pitch canker affecting Monterey pine may have originated in Mexico. Again, more recent data raise related concerns. In December 1997, Daniel J. Hilburn of the Oregon Department of Agriculture contacted APHIS concerning fungal and insect infestations of railroad ties imported from Mexico in compliance with APHIS' regulations.
- * development of more effective phytosanitary measures targeted on fungi and disease pathogens in logs, loose packing material, and products used as compost or mulch.
- * the danger of introducing or spreading pests not native to North America but now found in Canada and Mexico.

⁵United States Department of Agriculture, Forest Service, 1991. Pest Risk Assessment of the Importation of Larch from Siberia and the Soviet Far East, Miscellaneous Publication No. 1495. September, 1991.



OREGON
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Aggressive Defenders of Oregon's Wild Lands

February 6, 1998

Mr. Jack P. Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development, APHIS
US Department of Agriculture
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50

- implications of the phase-out of methyl bromide. The DSEIS makes reference to other chemicals but it does not clarify whether any has yet proved as effective as methyl bromide.

The "updated information" section is incomplete. While the GAO report and APHIS' response are summarized, the DSEIS does not say explicitly which of the new managerial approaches it has *adopted* specifically for handling raw wood imports. Do any of the steps that have been adopted apply to wooden packing materials? Are any members of the national and local Agricultural Quarantine Inspection teams trained in problems related to wood imports? What standards have they set that are relevant to wood imports?

The "updated information" section also fails to mention or explain the relationship of this analysis to a possible change in practice among wood exporters. Chilean government and industry officials with whom WAFRC met in November told us that Chilean exporters are now applying heat treatment to logs destined for the U.S. This development is monumental in its importance, as it argues for the practicality of requiring heat treatment -- the preferred treatment -- for logs from all exporters. Yet APHIS does not mention this reported change in the "updated information" section. By omitting this information, APHIS appears to be trying to avoid facing the necessity for re-thinking its regulations.

We have already mentioned the omission of a reference to the Mexican risk assessment and detection of additional insect pests introduced on wood packing materials and the resulting reported pending changes to APHIS regulations.

We continue to consult with scientists to develop recommendations for more effective phytosanitary regulations targeted on pests associated with the great variety of forms in which unprocessed wood is imported. We would be pleased to meet with APHIS officials to discuss ideas put forward to us.

Thank you for considering the comments of the Western Ancient Forest Campaign and Defenders of Wildlife. We look forward to working with APHIS, other affected agencies, and the U.S. Congress to develop truly effective phytosanitary regulations.

Yours truly,

Faith Thompson Campbell

Faith Thompson Campbell, Ph.D.
Invasive Exotic Species Program
Western Ancient Forest Campaign

Dear Mr. Edmundson:

Just today I learned of another foreign pest that is ravaging forests. This is the non-indigenous shoot moth (*Rhyacionella boolliana*) that is causing "incalculable" damage to the forests of Chile. We are already suffering from Port Orford Cedar root rot, white pine blister rust, Dutch elm disease, and chestnut blight. We must not let that happen here in the U.S. (again).

Oregon Natural Resources Council Action and Oregon Natural Resources Council Fund (collectively herein, ONRC) respectfully submits the following comments pertaining to the Importation of Logs, Lumber, and Other Unmanufactured Wood Articles Draft Supplemental Environmental Impact Statement prepared by APHIS. Deficiencies identified by the court in the original EIS are once again insufficiently resolved in the DSEIS. These significant inadequacies will not go unrecognized by the court in its evaluation of the document. The following comments focus on the court-identified inadequacies of the EIS, but we also wish to incorporate the criticism of the original EIS set forth in ONRC's April 20, 1994 comments. A copy of those comments are also enclosed for reference. Our attorneys at the Western Environmental Law Center will also be forwarding comments on our behalf. We urge to consider and address the full scope of the impacts before submitting the FSEIS.

I. AREAS OF THE EIS THAT THE COURT FOUND TO BE INADEQUATE WHICH THE DSEIS DOES NOT SUFFICIENTLY RESOLVE:

A. Individually Ineffective Control Measures will NOT be Effective Collectively.

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No formal risk assessment has been performed to support APHIS's assumption that individually ineffective control measures will be effective collectively. Merely reformatting the control measures discussed in the original EIS does not sufficiently resolve this problem. Research to quantify the effectiveness of the combination of control factors must be performed. Detailed, fact-based discussion on how each of the control measures supplements the inadequacies of the others is required to meet the court stipulation.

As provided by § 1502.2(b) of the Council on Environmental Quality (CEQ) regulations for the implementation of the National

ONRC comments on SDEIS

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Environmental Protection Act (NEPA), before the impacts can be considered sufficiently addressed, the EIS must show why further study is not warranted. APHIS acknowledges uncertainty in the effectiveness of certain controls resulting from lack of scientific data on specific identified pests. APHIS then inappropriately takes upon itself the authority to determine that the, "preponderance of evidence indicates that a measure would be effective against similar organisms..." (p. 23 DSEIS). In situations where APHIS determined that a preponderance of evidence supported a finding of effectiveness to eradicate pests, APHIS did not disclose the quantitative risk that the uncertainty posed. Considering the magnitude of the consequences of exotic pest infestation, the public and the decision-maker have the right to know the risk masked by APHIS's unsupported conclusions. The question of why further research isn't warranted to reduce the uncertainty is one of many questions left unanswered.

B. Significant Information Omitted

1. Adequacy of Risk Assessment is Relevant to the Adequacy of the Control Measures.

APHIS did not honestly and completely disclose the findings of the risk assessment performed for the original EIS to determine the risk of infestation. The findings conveyed a risk much higher than what APHIS disclosed. The DSEIS does not correct the downplaying of the magnitude of the risk revealed in the risk assessment.

APHIS must be cautious in inferring low risk where available scientific information leaves gaps. Where inferences are drawn, the limitations of the data leading APHIS to the inference must be disclosed. Aside from the fungal genus *Ophiostoma* example (See p. 29 of DSEIS), APHIS incorrectly assumes that lesser availability of information on less common pests indicates less risk of the pest establishing itself in the US. On the contrary, APHIS should proceed with greater caution and assume greater risk of the unknown especially in light of the potentially serious social, ecologic, and economic impacts an epidemic of exotic pests could have on our country's forests. Pursuant to § 1502.22 (b)(4) of CEQ regulations implementing NEPA, "reasonably foreseeable significant adverse impacts" must be assessed when impacts will have catastrophic consequences (as they will in this instance) even if their probability of occurrence is low.

If the only treatments acknowledged as effective against all pests are (1) standard kiln drying schedules for lumber used in the US and (2) raising and maintaining the internal temperature of the wood to at least 71.1 C for a minimum of 75 minutes, why grapple with less effective, higher risk methods such as spraying pesticides, debarking, and fumigation? This is a blatant gambling with the public health and the welfare of a highly economically and socially valued natural resource.

ONRC comments on DSEIS

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Once again, where gaps in available scientific information exist, CEQ regulations require an explanation for why further study is not warranted. This explanation is left undiscussed in the DSEIS.

2. Compliance (or Noncompliance) by Exporting Countries

APHIS fails to evaluate the impact of noncompliance of mitigating control measures by exporting countries. The section of the DSEIS devoted to supplementing this court-identified inadequacy is seriously flawed. It is disjointed from the inherently related analysis of mitigation measures discussed above and at pages 23a-27 of the DSEIS. The mitigation measure analysis is divided into 2 stages: 1. requirements to be met prior to entry into the US, and 2. requirements to be met after entry into the US. (See p. 24 of DSEIS). Noncompliance by exporting countries seriously effects the adequacy of "requirements met prior to entry into the US" and creates an impact that requires analysis but was overlooked by APHIS in the DSEIS. Where there is complete non-compliance by an exporting country, much more scrutiny will be required of APHIS inspectors, thus a different job must be performed than on wood products imports that have previously been treated. Non-compliance by an exporting country equates to a significant environmental impact that must be provided full and fair discussion as required by NEPA (See 40 CFR § 1502.1).

3. Human Health Effects of Particular Eradication Efforts

The DSEIS makes clear that many factors specifically identified contribute to the analysis of the potential human health effects caused by treating pest infestations. In summary, the DSEIS states many effects could happen at varying degrees of severity depending upon various factors. In order to analyze the consequences of an eradication, a particular eradication effort must be analyzed in context. One example which may be an eradication effort likely to occur is aerial spraying of pesticides in a densely populated urban area. How will this impact people who consider themselves healthy? People who are asthmatic? How does this impact medical expenses absorbed by taxpayers? What is the likelihood of residual health impacts from eradication efforts? These questions and others must be addressed for this example and other possible eradication strategies. The DSEIS lacks adequate specificity for evaluating potentially significant long-term and short-term health consequences.

C. Comparison of Alternatives

The alternatives provided by APHIS provide no means of comparison based on treatment method or risk analysis. Merely identifying different products which will be prohibited presents an extremely narrow perspective of the potential impacts of plant pests on imported wood products and does not adequately define the issues to be analyzed. The CEQ regulations require that the environmental impacts of the proposal and alternatives be presented in a comparative form, "thus sharply defining the issues

ONRC comments on DSEIS

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and providing a clear basis or choice among options by the decision-maker and the public." (See 40 CFR § 1502.14).

Issues raised by the court in its critique of the original EIS are left unanswered in the DSEIS. These issues specifically include:

1. extent to which alternatives rely on the use of methyl bromide,
2. use of different treatments for different kinds of wood from various parts of the world, and
3. effectiveness of different treatment methods against different kinds of threats.

By identifying these inadequacies, the court is asking for information to make comparisons beyond "relative ranking." The relevancy scale presented in Fig 2 p. 60 of the DSEIS fails to disclose what data was used to justify a ranking of "1-- smallest environmental impact on the resource area" or another ranking. One of the purposes of presenting alternatives is to provide the public (and decision makers) with necessary data to make informed decisions, not to reaffirm decisions already made by APHIS through its relevancy analysis. Identifying how each of the alternatives individually impacts each of the identified subtopics (Human Health, Forest Resources, biodiversity, etc.) would greatly increase the information provided enabling informed decision making in light of the risk involved.

When dealing with adverse consequences of the magnitude that are involved here, we need to either (1) avoid the risk by not importing products that bear the risk, (2) ensure that foolproof treatment methods are employed (which it is doubtful they even exist), or (3) rely on carefully crafted and analyzed multiple redundant non-fool proof mitigations to minimize the risk of the adverse consequences.

II. ADDITIONAL AREAS FOUND TO BE INADEQUATELY ADDRESSED IN THE DSEIS:

A. There is no standard for critical environmental related wood terminology overseas.

APHIS uses "kiln dried" as a mitigation measure for controlling pests on imported logs.

In the US alone, the term 'kiln dried' has different meaning for different products, species, and territories. The different meaning are recognized by the trade. Overseas, however, the term "kiln dried" has no measurable or verifiable standard of meaning. The use of the term has critical significance in a number of environmentally sensitive rules and regulations and the lack of a common worldwide agreement on its meaning can pose serious environmental threat.

Additionally, there is no guarantee that wood marked by overseas companies as kiln dried actually is kiln dried. Industry experts have indicated that imported wood labeled as kiln dried is clearly not.

B. Incorrect Import documents are Submitted with Wood Products Regularly.

Due to the high commercial stakes involves in trade imports, discrepancies in documents are quickly resolved in order to achieve the necessary conformity. The result may be that goods delivered don't match the description on their papers-- problematic to logging imports where pest treatment prior to entry into the United States is increasingly relevant. In instances where documents are arbitrarily changed to achieve conformity, the short-term commercial gain of completing a sales contract is valued more highly by the industry than is minimizing the long-term risk of pest infestation. The court opinion and the issuance of the injunction indicate that the value in minimizing the risk of infestation and the potential social impact of an epidemic must be elevated.

C. APHIS Rules Wrongly Exempt Mexico from the Same Standards as Other Export Countries.

There is an unspoken, uncodified industry understanding that regulations on log imports into the US across the Mexican border are less stringently enforced than regulations applied to other countries. Aware of this discrepancy, Chilean and Venezuelan companies import forest products to Mexico that would not otherwise pass American customs and agriculture standards. After changing hands and losing identity, the logs may enter the US as Mexican products. Like other log imports, those from Mexico are required to be kiln dried. Here is another instance where the lack of a uniform worldwide definition for the term kiln dried may not meet the US standard accepted as adequate for eradicating pests.

The importation of unmanufactured wood products puts the nation at risk of losing valuable forest resources and creating serious public health problems. Oregon Natural Resources Council hopes APHIS recognizes this risk and will modify its importation practices accordingly by placing a higher value on public welfare than on short-term financial gain.

III. THE PUBLIC PROCESS FOR THE SDEIS WAS FLAWED.

The public process for the SDEIS has been flawed. People who were supposed to get the SDEIS did not get it. I know of people who sent in scoping comments and did not receive the SDEIS. All those who commented on the original EIS and all those who submitted scoping comments must be invited to participate in the NEPA process. The broader forest conservation community and the members of garden clubs and industries potentially affected by the spread of forest pests and diseases should also be involved. Did APHIS attempt to involve these groups?

ONRC comments on SDEIS

ONRC comments on SDEIS

Sincerely,

Doug Heiken

Doug Heiken
Western Oregon Field Representative

research and drafting by Sarah Holmes
enclosure: letter from Dr. Joy Belsky



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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FEB 9 1998

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSISTANCE

Mr. Terry L. Medley
Administrator
Animal and Plant Health Inspection Service
312E
14th and Independence Avenue, S.W.
Washington, D.C. 20250

Dear Mr. Medley:

In accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, the Environmental Protection Agency (EPA) has reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) for Importation of Logs, Lumber, and Other Unmanufactured Wood Articles. The primary purpose of the DSEIS was to correct deficiencies in the final EIS completed in 1994 as determined by a ruling by the U.S. District Court for the Northern District of California. The Court found that the final EIS was deficient in examining the efficacy of combinations of control methods, omitted important information, and inadequately compared the alternatives.

EPA agrees that it is extremely important to prevent the introduction and dissemination of exotic animal and plant pests and pathogens in the United States so that agricultural, aquacultural, and forest resources will be protected. Accordingly, there is a need for an effective oversight system to prohibit the introduction of plant pests in imported logs, lumber, and other unmanufactured wood articles. Based on our review of the DSEIS, EPA has rated the document as "Environmental Objections-Insufficient Information (EO-2)" which means we have environmental objections with some aspects of the proposed program and that additional information should be included in the final SEIS (an explanation of EPA's ratings is enclosed). Our objections are described below concerning the DSEIS's discussion of the efficacy of combinations of control methods, compliance by exporting countries, human health effects of eradication and control efforts, comparison of the alternatives, and the use of methyl bromide.

Efficacy of Combinations of Control Methods

EPA believes that more information should have been offered to support the analysis on assessing risk of introducing pests and the consequences of their establishment. Some information was offered about the few cited studies and several tables summarize the reduction of pest risk for different treatments. However, the information presented did not include the basis for determining whether the different treatments would result in some, extensive, or total reductions. In addition, it is stated that uncertainty can be reduced to a negligible level if the preponderance of evidence indicates that a measure would be effective against similar organisms or effective against a wide variety of organisms. This evidence is not made clear to the reader by offering tables with indication of reduction of risk for each treatment. It is clear that the risk assessments require the extrapolation of existing data to other similar species. Given that very little species-specific information is available to make decisions, it is important that the final SEIS explain why and how the treatments will reduce the risks of pest introduction, a more quantitative measurement of reduced risk (i.e., statistical analysis), and additional information on how the risk analysis was determined.

Compliance by Exporting Countries

The DSEIS offers a very good discussion of the efforts to strengthen the U.S. inspection program, the requirements for wood processing facilities in the U.S. and in exporting countries, and the response to noncompliance of control regulations by importers. The DSEIS did not, however, adequately evaluate how compliance problems abroad would limit the effectiveness of the preferred alternative. Based on earlier statements in the DSEIS concerning the limited ability of U.S. inspections to reveal pest problems, it is evident that there is a considerable amount of reliance on the good faith efforts of importing countries to keep pest species out of this country. While steps have been taken to improve that compliance, the DSEIS does not reconcile the inability to detect the presence of pests with reliance on importing compliance. The final SEIS should discuss a realistic scenario based on existing conditions rather than on best-case scenarios. In particular, the concept of shipboard heat treatment described in the DSEIS appears to be a promising means to lower the risk of release of an exotic pest in the United States. Additional information on how APHIS could assist in the development and demonstration of heat treatment techniques would be useful.

Human Health Effects of Eradication and Control Efforts

While we agree that detailed discussion of human health consequences of eradication must be made within the context of specific activities, the information presented in the DSEIS does not adequately address the human health effects of the program.

Offering two examples of the health effects of past plant pest introductions does not adequately convey to the reader the extent or variety of possible impacts that can occur. In addition to providing more examples, it would be helpful to include a discussion of the range of effects that have and could occur. The DSEIS states that APHIS is aware of the potential human health risks from the list of pesticides provided but does not offer any sense of the nature or magnitude of the risk. We believe that those risks should be discussed in some detail. The DSEIS also states that potential impacts to human health were discussed in detail in the 1994 Final EIS. In reviewing that section, the only part that is adequately detailed is the information concerning the effects of methyl bromide. We suggest that additional information be presented in the final SEIS similar in detail to the presentation offered in the 1994 FEIS on methyl bromide. The DSEIS states that a NEPA analysis is prepared for each program undertaken to contain or eradicate an outbreak. We suggest that the final SEIS include more detailed information on the potential risks to human health and other resources.

Comparison of the Alternatives

EPA believes that the information to support the comparison of alternatives does not adequately explain the environmental consequences of each alternative. While the matrix is very helpful in conveying the relative rankings of each alternative, it should not take the place of a more thorough discussion of the impacts of each alternative. We suggest that the final SEIS provide more information on the environmental consequences of each of the alternatives using the ranking elements provided in the DSEIS. We also suggest that the statement on page 64 that plantation-grown trees generally present fewer pest risks than native forests be clarified. Most experts believe that crops are generally more at risk if they are concentrated into one area in homogeneous plots.

According to the Council on Environmental Quality's (CEQ) NEPA regulations, the purpose of comparing alternatives is to describe the environmental consequences of the program and to explain how decisions were made in relation to environmental impacts. Without this context, the reader could be left with the impression that the DSEIS serves only to promote the preferred alternative rather than fairly describe the environmental consequences of each of the alternatives. Since the DSEIS was tiered to the final EIS, the reader must pull together the information from the previous EISs and the DSEIS. EPA believes that the DSEIS could have been a more comprehensive document by integrating the information from the earlier EISs on the regulations to control pests associated with importation of logs. Due to the lack of adequate information and the DSEIS's focus on responding to the U.S. District Court for the Northern District of California, it was difficult to make an informed opinion on the environmental consequences of the alternatives or understand

how the environmental considerations affected the development of the program. While the CEQ regulations encourage tiering to other documents, we suggest integrating the information from the draft EIS, final EIS, and DSEIS into the final SEIS, along with the addition of a more detailed accounting of the environmental consequences of the alternatives, to offer a more comprehensive discussion in one document.

Use of Methyl Bromide

Concerns were raised about the use of methyl bromide in EPA comments to the draft and final EIS on the program. The DSEIS discusses the use of methyl bromide which is a known ozone depleting substance. We continue to have concerns that the program does not plan for the development of alternatives to methyl bromide. There is some discussion in the DSEIS that alternatives products will be available after the ban on production and importation occurs on January 1, 2001. It would be useful to consider whether the exporting countries may continue the use of methyl bromide since their environmental regulation may be less stringent than U.S. regulations and alternatives may be expensive. We suggest that a more thorough discussion be included in the final SEIS that considers the alternatives to the use of methyl bromide and mechanisms to promote the use of alternatives.

We appreciate the opportunity to review and comment on the DSEIS. If you have any questions regarding our comments, please contact Jim Serfis of my staff at 202-564-7161.

Sincerely,



Richard E. Sanderson
Director
Office of Federal Activities

Enclosure

23 February 1998

Mr Jack P Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
Policy and Program Development
Animal and Plant Health Inspection Service (APHIS)
US Department of Agriculture
4700 River Road, Unit 149
Riverdale MD 20737-1238
USA

Fax: 001 301 743 3640

Dear Sir

APHIS - Draft Supplement to the Environmental Impact Statement, December 1997

- 1.0 This submission is made by the Royal Forest and Bird Protection Society of New Zealand (Inc) in response to your agency's publication entitled "Importation of Logs, Lumber and other Unmanufactured Wood Articles - Draft Supplement to the Environmental Impact Statement" (SEIS), dated December 1997.
- 2.0 The Royal Forest and Bird Protection Society is New Zealand's main non-governmental conservation organisation. We have 40,000 members and 56 regional branches. The Society was formed in 1923 and our main Constitutional object is to take all reasonable steps within the power of the Society for the preservation and protection of the indigenous flora and fauna and natural features of New Zealand, for the benefit of the public including future generations. We are also committed to the protection and conservation of global indigenous biodiversity
- 3.0 New Zealand has suffered grievously from the deliberate, accidental and illegal introduction of alien plant and animal species that have wrecked havoc with our indigenous ecosystem. The combined assault of these alien species is the greatest ongoing threat to New Zealand's indigenous biodiversity



FOREST
& BIRD



- 4.0 Despite the shocking environmental and economic impacts caused by alien species, New Zealand has been very slow to learn from past mistakes. A new regulatory regime is being established to assess applications for imports of new species. Up till now this has been undertaken by our Ministry of Agriculture whose corporate culture has resulted in them ignoring or downplaying impacts on indigenous plant and animal life (as opposed to impacts on crop plants, exotic plantation timber species and domestic stock). MAF also have a strong bias towards WTO 'free' trade agendas that distort decisions on impact evaluations in favour of the importer, resulting in a series of environmentally and sometimes economically damaging species being approved for import.
- 5.0 The Ministry of Agriculture and the soon-to-be-merged Ministry of Forestry are responsible for phytosanitary regimes, both for imports and exports. Forest and Bird has extensive documentation on the problems arising from the accidental introduction of alien species into New Zealand through the movement of goods and people. We are also familiar with the deficiencies and failings of our border security and phytosanitary regimes that led to these introductions. We have less knowledge and understanding of the adequacy of preventive measures New Zealand takes to ensure species present here are not accidentally introduced to other countries through our exports or the movement of people. The potential for New Zealand species to cause problems elsewhere clearly exists. A New Zealand native nematode was accidentally introduced into Ireland, possibly in soil attached to nursery plants, and has severely impacted on Irish earthworms. A small number of New Zealand native plants have become environmental weeds in other countries. New Zealand has a range of forest fungi and invertebrates that could hitchhike into the U.S. on log or lumber exports unless adequate debarking, cleaning, fumigation and inspection are done before the product arrives or is distributed in the U.S. We cannot comment on the thoroughness of the actions taken by New Zealand exporters and our regulatory authorities to ensure log and lumber exports to the U.S. are bug free. However, it is an issue the U.S. Department of Agriculture should give serious attention to, as requested by local community and environmental groups.
- 6.0 New Zealand claims to be a world leader in its border biosecurity regime. If this is so, then the world standards are far too low. Despite the claimed stringency of the New Zealand regime, a seemingly growing number of alien plants, fungi, invertebrates and diseases arrive at our borders, with some escaping detection and establishing here. Recent examples include the following:
- Tussock moth (*Orgyia thyellina*). A severe infestation of this Asian species (whose caterpillars can defoliate a number of tree and shrub species) was discovered by a member of the public in an Auckland city suburb. After a massive effort involving repeat aerial spraying of residential areas the moth has hopefully been eradicated.
- Eucalypt brown lacy lerp - a sap sucking insect discovered on eucalypt trees at Auckland airport.
 - Clover root weevil is spreading rapidly throughout New Zealand farm pastures threatening nitrogen-fixing clover worth more than \$3 billion a year to the economy, with no scientific solution in sight.
 - Asian tiger mosquitos were found in a water-filled bucket on an imported truck at an Auckland wharf.
 - Orange psyllids or jumping plant louse has quickly established itself in the Auckland district over the last couple of years. Scientists are "baffled how the insects got here or where they came from".
 - A Japanese butterfly was found in a used car yard in Dunedin, arriving on a used Japanese car.
 - Gypsy moth eggs have been recorded arriving here on at least four occasions on imported vehicles, logs and shipping containers. Unless greater precautions are taken in the ports of origin it seems inevitable gypsy moth will eventually establish in New Zealand.
 - Willow sawfly has become well established in New Zealand. It is not known how it arrived in this country.
 - Rabbit calicivirus was deliberately smuggled into New Zealand and is now widespread in rabbit populations. The import application for the disease was rejected by MAF but farmers smuggled the virus in and the culprits escaped detection. A half-hearted inquiry by MAF and ambivalent attitudes by some officials and farmer-friendly politicians contributed to this major breach of New Zealand's biosecurity.
 - Used logging machinery has been imported into New Zealand from North America with dirt and plant matter attached.
- 7.0 There are many more examples in our files but the point is made that new alien species are accidentally introduced into New Zealand each year. These species can and are causing severe ecological and economic damage to this country. This is despite the efforts of a self proclaimed world leading biosecurity border control regime.
- 8.0 Recently, a coalition of the major farming and horticultural interests, which included the Farm Forestry Association, wrote to New Zealand's Minister of Biosecurity calling for much stronger action to reduce the risk of new pests and diseases arriving in New Zealand. The key issue they identified was the need to reduce risks at the port of origin where the goods are loaded. "The most effective biosecurity method is to prevent unwanted organisms by targeting them before they land in New Zealand." They go on to observe,

with an honesty rare on this topic, that "Our international competitors (and potential importers) will not be concerned if unwanted organisms are introduced. Indeed it will be quite the opposite as markets will suddenly open up to them." The strenuous and bizarre efforts recently by New Zealand MAF officials to prove that Australia was not free of fireblight disease to open up new markets for New Zealand apple exports neatly illustrates the point.

9.0

Some of the reasons we believe New Zealand authorities are failing to prevent a worrying number of unwanted organisms entering this country are listed below:

- A major increase in the volume of imports and the increasingly diverse points of origin.
- Increasing imports of raw products such as whole logs.
- Imports of used vehicles and machinery.
- Dubious to false phytosanitary clearances made in ports of origin.
- Lack of awareness and concern amongst New Zealand importers and overseas exporters of the problem of unwanted organisms.
- A unwillingness by MAF to take actions that would upset trading partners who may take retaliatory action.
- A focus on inspections and remedial action at points of entry here rather than cleaning and fumigation at ports of origin.
- An unwillingness by MAF to prosecute for breaches of biosecurity.
- An overwhelming political and corporate culture committed to the liberalisation of world trade and a denial of the serious ecological and economic damage that can result from the introduction of alien species. The emphasis in the New Zealand Government and New Zealand forestry industry responses to the Draft Supplement to the EIA is on the economic consequences for New Zealand rather than the utmost importance of stringent phytosanitary regimes. This troubles us, as does their presentation of New Zealand's biosecurity regime as being of the highest standard. This regime is consistently failing to prevent a disturbing number of unwanted organisms entering this country.

10.0 Conclusion

10.1

Decisions on biosecurity measures should be made on a thorough evaluation of the adequacy of the measures, both on paper and in practice, to reduce the risk of introducing unwanted organisms to negligible levels. (Bitter

experience shows that biosecurity regimes that appear more than adequate on paper often fail in practice, e.g. the arrival in New Zealand of extremely serious agricultural and forestry pests despite a self-proclaimed world leading biosecurity regime.)

10.2

Economic arguments based on impacts on the exporters and importers should not be relevant as these arguments only consider short term economic impacts. Trading countries can inflict enormous economic and ecological damage on each other from the introduction of alien diseases and pests. These economic impacts are rarely considered by the exporters and, suicidally, are often regarded as being a second tier issue by the importing nation keen to be seen to be promoting "free" trade.

10.3

Countries at the forefront of the promotion of "free" trade and the removal of barriers to trade must take ownership of the consequential biological warfare they have unleashed on the world through the spread of unwanted organisms. Arguments used by the New Zealand Government and industry to gain access to overseas markets will be used by the overseas exporters to gain access to New Zealand. Therefore we request that the U.S. Department of Agriculture rigorously scrutinise the adequacy of the phytosanitary measures that apply to the importation of logs, lumber and other unmanufactured wood articles. Decisions should be based on New Zealand's performance on biosecurity matters and the economic impact pleading should be ignored.

10.4

In making this submission Forest and Bird has no ulterior motives as we have a cordial and productive relationship with the New Zealand plantation forest industry. Plantation timber from New Zealand can provide a wood source that is produced with less environmental damage than wood produced from natural forests. However, as a country that has suffered grievously from the impacts of alien pests and diseases, New Zealand must ensure it does not spread unwanted organisms to other countries.

Yours sincerely



Kevin Smith
Conservation Director



February 27, 1998

Mr. Jack Edmundson
Environmental Protection Officer
Environmental Analysis and Documentation
PPD/APHIS/USDA
4700 River Road, Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson:

Thank you for forwarding a copy of the December 1997 draft supplemental environmental impact statement (SEIS) associated with the importation of logs, lumber, and other unmanufactured wood articles. As I had mentioned in the American Nursery & Landscape Association's (ANLA's) request for a reasonable extension of the comment deadline, we had trouble obtaining the necessary documents in time to review them adequately before February 10. Fortunately, the materials you forwarded me had arrived by the time I returned to the office on the 11th. ANLA appreciates your intent to review and consider our comments, moreover, we believe the National Environmental Policy Act implementing regulations (40 CFR 1502.19) compel APHIS to do so.

ANLA is the national trade organization representing the U.S. nursery and landscape industry. We directly represent the interests of over 2500 nursery and greenhouse growing operations, landscape design and installation companies, and retail garden centers. Through the membership of state and regional nursery associations, we represent an additional 15,000 small businesses and family farms.

ANLA has long supported and valued the vital role of USDA-APHIS programs that are the focal point of efforts to safeguard U.S. plant resources from the threat of nonindigenous plant pests of all types. Because our industry grows and uses a wide array of woody and herbaceous plants, we often bear the brunt of quarantine restrictions and management costs when the pest exclusion system fails. Our desire for effective plant protection programs, coupled with our understanding of the increasing importance of international trade, are reflected in ANLA's comments on the draft SEIS document. ANLA shares the broad goal of minimizing the potential for nonindigenous pest introductions that may result from the international movement of logs, lumber, dunnage, and other unmanufactured wood articles. Specific comments follow.

Page 6. C. (c)(1)(iii) – refers to specific new circumstances relevant to environmental concerns and bearing on the proposed action or its impacts. One such circumstance that we believe has received inadequate treatment in the document is the relatively recent increase in exotic pest detections associated with dunnage and wood packing materials – regardless of the regulatory status of the associated commodities

14

A Canadian report distributed at the 1997 North American Plant Protection Organization meeting described a range of pests recovered during 1997 from wood packing materials. In most cases, these packing materials were associated with unregulated commodities such as stone and wire. We understand that similar pest interceptions have occurred in the U.S. To address this dangerous situation, the North American Plant Protection Organization has drafted standards for the management of pest risk associated with dunnage and wood packing materials. We understand that APHIS is currently evaluating the NAPPO draft standards. Recent findings, as well as the draft response, are relevant to the scope and content of this SEIS.

Page 9, second full paragraph – states that "...the preferred alternative requires plant pest treatments in all cases in which APHIS has identified a risk of plant pest introduction." Yet, as mentioned above, no treatments are required for wood packing materials accompanying unregulated commodities – despite the recently-documented pest risk, and the frequent inability to adequately inspect such packing materials based on the commodity and how it is packaged for shipment. This conflict should be addressed in the document.

Page 19, IV A, end of paragraph – states "Measures can be taken to reduce the probability of pest infestation to a negligible level..." and goes on to provide as an example, the production of wood in plantations. We believe the statement is unsupported by the example. As in any managed production system, pest control decisions are based on many factors, but are usually tied to "economic damage thresholds." While it may be accurate to state that plantation-grown trees pose lower pest risk, it is overly broad to imply that plantation production reduces pest risk to "a negligible level."

10

Page 33, top of page – states that "as has been shown with imports of nursery stock, plants, roots, and bulbs in growing media, an overlapping combination of pest control methods is effective against known potential pests." ANLA believes this statement is overly broad, and not fully supportable based on a number of pest interceptions and general uncertainties surrounding nursery stock imports. Moreover, the statement biases this discussion in favor of the preferred alternative. ANLA understands that generally, no more than about 2% of nursery stock imports are inspected at the port of arrival. Furthermore, once a consignment has cleared the port, there is little likelihood of discovering a pest infestation early enough to necessarily trace it to origin.

2

Yet, there are reports of pest problems intercepted on precleared materials governed by Q-37. For example, in the early 1990's the California Dept. of Food and Agriculture repeatedly intercepted an exotic mealybug, *Phenacoccus emansor*, on precleared Iris bulbs from the Netherlands. ANLA has reason to believe that arabis mosaic virus is entering the country on a range of herbaceous plants imported under preclearance arrangements from Europe, yet because the host range of this serious virus is not known, such imports are not monitored. CDFA has also detected Eurasian poplar leaf rust, *Melampsora larici-populina*, in and around nurseries in the state. Based on detection patterns, this exotic rust disease most likely evaded detection at the ports. Another fairly recent quarantine breach involved geranium cuttings from the Canary Islands, which were found to be infested with old world bollworm.

A thorough discussion of port interceptions associated with nursery stock and related commodities -- especially where combinations of approaches have been applied in accordance with preclearance programs -- would enhance the integrity of the SEIS document

ANLA Comments on Log Importation Draft SEIS
February 27, 1998
Page 3

Page 36 – The description of the Enhanced Risk Assessment for Determining the Quarantine Status of Exotic Organisms lists “*agricultural concern*” as the third criterion. Is the exclusion of environmental impact concerns an error of omission in the SEIS document, or in the risk assessment process itself?

Page 38 – The discussion of preclearance arrangements seems superfluous; our understanding is that preclearance programs are not a part of the current Q-40 regulatory framework. Furthermore, ANLA is aware of anecdotal reports in the industry that the level of preclearance oversight in Europe associated with Q-37 and plants in growing media is quite limited. If the discussion of preclearance is to remain, perhaps more specifics could be provided on existing programs, and their potential application to unmanufactured wood imports. This section also positions inspection on arrival as an added safeguard, even though the considerable limitations and unreliability of inspection at the ports are discussed elsewhere.

Page 41, d. Risk of Noncompliance – Statistics on penalties are provided, with the inference that the current penalty framework is a deterrent to commercial violations. Yet, the raw numbers presented are not characterized as to type of violation. Nor do they necessarily support the assumption that penalties are a deterrent. If one takes the FY1996 \$71,490 in civil penalties collected from stipulation agreements, and divides that number by the 72% of the 598 cases that were resolved through payment of civil penalties, the average penalty assessed would appear to have been \$166.00. Perhaps this number is skewed downward due to a large volume of minor passenger infractions. If APHIS wishes to assert that existing penalties and enforcement activities do serve as a deterrent, more detail would be helpful on import scenarios and violations that involve commodity importation rather than passenger arrivals.

Finally, it would be relevant to discuss the compliance history of key countries from whom unmanufactured wood product exports have been or are expected to be received, as well as APHIS’ options for recourse in the international arena.

A discussion of legislative proposals is probably not appropriate for the SEIS document. However, it is worth emphasizing that a growing coalition of agricultural and environmental interests supports in concept the introduction and passage of legislation that would:

- 1) streamline and enhance the statutory authorities under which APHIS implements plant protection programs; and,
- 2) increase penalty authorities such that penalties may serve as a strong deterrent to willful violations of quarantine safeguards.

Recent documented cases of smuggling involving prohibited fruit fly host materials have clearly demonstrated that existing penalties are not a deterrent. Our intent in emphasizing these points is to suggest that the impact of current penalty authority should not be overstated in the SEIS.

Page 32, end of third full paragraph – states “APHIS’ experience, during the short period that the wood regulations have been in effect, indicates that they have successfully prevented quarantine pests from entering the United States.” This cannot be assumed, and may misguide readers by inferring that the preferred alternative has been validated by field experience. Beyond port inspection activities, neither APHIS, nor the states, maintains a sufficiently comprehensive pest detection program to quickly detect exotic pests that may have slipped through the port

ANLA Comments on Log Importation Draft SEIS
February 27, 1998
Page 4

inspection program and become established. Two recently-promulgated federal quarantines support this; pine shoot beetle (*Tomicus piniperda*) is believed to have been introduced into at least two Great Lakes states, perhaps 10 years or more before it was first discovered. Similarly, Asian longhorned beetle (*Anoplophora glabripennis*) is believed to have been introduced into Brooklyn, NY at least several years prior to its detection. In both cases, non-regulatory personnel reported the initial finds.

Page 52, second full paragraph – states that “for the most part, APHIS is equipped to prevent and handle plant pest introductions should they occur.” It seems to us that APHIS faces at least two major deficiencies in this area. First, APHIS lacks ready access to funds necessary to quickly respond to a pest introduction. While interested parties have discussed as a possible solution the creation of a “no-year” emergency fund that could be accessed at the discretion of the Secretary of Agriculture, such a fund does not yet exist. Secondly, as mentioned above, APHIS and the states lack a coherent, comprehensive early pest detection system that would likely be capable of quickly pinpointing a forest pest introduction. APHIS should recognize these deficiencies in the document, so that policymakers and stakeholders can decide whether to advocate enhancements to our domestic pest safeguarding capability.

Page 60, Figure 2 – The figure and accompanying discussion comparing the alternatives based on pest exclusion and environmental impacts appears to be unfairly biased toward the preferred alternative. It may be an overstatement to position Alternative 2 as meaningfully different (more protective) than Alternative 5. With regard to unmanufactured wood, Alternative 5 is more protective because most imports are prohibited. On the other hand, Alternative 5 may be slightly less protective because it does not regulate entry of wood packing materials. Yet, as mentioned previously, the preferred alternative also fails to address recently-documented pest risk associated with wood packing materials used with unregulated commodities. In short, ANLA believes it is unclear whether Alternative 2, the preferred alternative, can be considered more efficacious at excluding pests than Alternatives 3, 4, 5, or 6.

Also, we question the assumption that the preferred alternative may be more protective of biodiversity by encouraging production of trees in plantations over harvesting in wild forests. It is likely that most such plantations would be established on previously forested land after wild forests have been cleared.

ANLA hopes that these comments and observations will be useful toward strengthening the SEIS document. We have also attached a copy of a joint letter urging that specific actions be taken to address the grave risks associated with dunnage movement. This letter was signed in November, 1997, by ANLA and six western state/provincial associations. Please contact me if APHIS desires clarification on any of ANLA’s comments or concerns.

Sincerely,



Craig J. Regelbrugge
Director of Regulatory Affairs
and Grower Services

1511 13th Ave
SF, CA 94122
March 1, 1998

(54)
RECEIVED
3/4/98

Mr. Jack P. Edmundson
Policy and Program Development, APHIS
US Department of Agriculture
4700 River Rd, Unit 149
Riverdale, MD 20737-1338

Dear Mr. Edmundson,

I am writing to urge you to ban the import of raw logs! This is the only way to protect American forests from international pests!

The new Draft SEIS prepared by the APHIS is not sufficient to protect American trees. The importation of unmanufactured wood must be stopped! Trying to control the import of pests by inspection of the wood at ports is insufficient! Detecting pests is difficult and time consuming and some would be missed. There is no question about that. Your own Dept. of Agriculture in 1991 estimated that the establishment of a single pest, larch canker, could cause timber losses of \$129 million each year and estimated the cost of a multiple-pest-worst-case scenario at \$58 billion! We cannot afford this! Don't let it happen!

Please ban the importation of unmanufactured wood!

Sincerely,
Mary J. Petrofsky
Mary L. Petrofsky

(55)

RECEIVED
3/10/98

3/2/98

Dear Mr. Edmundson —

I urge you and your department to work toward a ban on the importation of all raw logs into this country, in order to protect our American forests from fungi and insects, which can devastate our trees!

Charles Michael
&
Eleanor Gerould

154 25th Ave
SAN FRANCISCO
CA 94115-1100

16

16

56
RECEIVED
3/10/98

3/5/98

Mr. Jack P. Edmundson
Policy and Program Development, APHIS
U.S. Department of Agriculture.

16 Simply and to the point. I would strongly encourage that the U.S. ban all and any imports of raw logs - to protect our nations forests. Thank you for listening to my opinion.

Thank you,
Dawn Diamond
256 5th Ave.
S.F. Ca 94118

57
RECEIVED
3/12/98

Karen Ashikeh
33300 Mission Blvd. #45
Union City, CA 94587

Mr. Jack P. Edmundson
Policy and Program Development
APHIS
US Department of Agriculture
4700 River Road, Unit 149
Roverdale, MD 20737 - 1238

Dear Mr. Edmundson -

Please support the ban on all Imported raw logs begin brought into the United States. These products contribute to disease and destruction of our forests and to world-wide deforestation in other lands.

As with the price of gasoline, the price of paper and lumber must go up before we begin to conserve trees and develop alternatives to wood products such as the use of recycled materials and other plant fibers. Importing trees from other nations does not help this process!

Sincerely,
Karen Ashikeh
Karen Ashikeh



DR. DAVID L. SCHNEIDER
OPTOMETRIST
414 E. (510) 848-0733

1730 HEARST AVENUE
BERKELEY, CA 94703

DEAR MR. EDMUNDSON -

I VOICE YOU TO SUPPORT A

16

BAN ON ANY IMPACT OF RAW LOGS -

TO PROTECT AMERICAN FORESTS.

Sincerely,

[Signature]

Dr. David Schneider
Optometrist

(58)

3/16/88

3/10/88

16

(59)

3854 Greenwood Ave
Oakland CA, 94611

Dear Jack P. Edmundson,
Please support a ban on any impact
of raw logs to protect forests from
the pitch cancer disease and its spreading.
Thank you

Sincerely,

[Signature]

March 5, 1998

Jack P Edmundson
Policy and Program Development, APHIS
U.S. Department of Agriculture
4700 River Road, Unit 149
Riverdale, MD 20737-1238

RE: Importation of raw logs

Dear Mr. Edmundson,

I am writing to express my concern about the risks of allowing the importation of raw logs and unmanufactured wood products from other countries. The environmental and economic threat of infestation by foreign pests present in imported raw lumber is great. The cost of fighting imported pests, together with the potential of these pests for wiping out our own forests, outweighs any benefit to importing cheap wood. Please support a ban on any import of raw logs.

Sincerely,



Daniel Heitkamp
1426 Ashwood Drive
Martinez, CA 94553



3884 Greenwood Ave
Oakland, CA 94602

March 11, 1998

Mr. Jack P. Edmundson
Policy and Program Development APHIS
U.S. Dept of Agriculture
4700 River Road Unit 149
Riverdale, MD 20737-1238

Dear Mr. Edmundson,

Due to the pitch - conker disease that is killing pine trees in California I am writing to you to urge you to support a ban on any import of raw logs to protect American forests. I hope it won't too late to save our trees and stop the spread of pests to other species. In any case, we should do everything possible. Thank you.

Sincerely,

David Edmundson

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Appendix B. Court Documents

The court documents contained in this appendix relate to the suits filed against the U.S. Department of Agriculture, Animal and Plant Health Inspection Service regarding the “Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, Environmental Impact Statement, July 1994.” The documents are as follows:

Order Granting in Part and Denying in Part Plaintiffs’ Motion for Summary Judgment and Denying Defendant’s Motion for Summary Judgment, filed February 27, 1997 . . . B-3

Order Granting in Part Plaintiff Oregon Natural Resources Council’s Motion for Preliminary Injunction and Denying Plaintiff Californians for Alternatives to Toxics’ Motion for Injunction and Declaratory Relief, filed June 5, 1997 B-35

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FILED

FEB 27 1997

RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

OREGON NATURAL RESOURCES COUNCIL,
et al.

No. C 95-4066 CW
C 96-1541 CW

Plaintiffs,

v.

ANIMAL AND PLANT HEALTH INSPECTION
SERVICE, an agency of the UNITED
STATES DEPARTMENT OF AGRICULTURE,

ORDER GRANTING IN PART
AND DENYING IN PART
PLAINTIFFS' MOTION FOR
SUMMARY JUDGMENT AND
DENYING DEFENDANT'S
MOTION FOR SUMMARY
JUDGMENT

Defendant,

and

AMERICAN FOREST & PAPER ASSOCIATION
and INDEPENDENT FOREST PRODUCTS
ASSOCIATION,

Intervenors.

CALIFORNIANS FOR ALTERNATIVES TO
TOXICS, et al.,

Plaintiffs,

v.

ANIMAL AND PLANT HEALTH INSPECTION
SERVICE, an agency of the UNITED
STATES DEPARTMENT OF AGRICULTURE,
et al.

Defendants,

and

AMERICAN FOREST & PAPER ASSOCIATION
and INDEPENDENT FOREST PRODUCTS
ASSOCIATION,

Intervenors.

Plaintiffs and Defendant each move for summary judgment. The

1 matter was heard on December 6, 1996. Having considered all of
2 the papers filed by the parties and oral argument on the motions,
3 the Court GRANTS Plaintiffs' motion for summary judgment with
4 regard to the adequacy of the Environmental Impact Statement, but
5 DENIES Plaintiffs' motion for summary judgment with regard to the
6 standard of risk adopted in the Regulations. The Court DENIES
7 Defendant's motion for summary judgment with regard to both the
8 Environmental Impact Statement and the validity of the
9 regulations. The Court orders the parties to submit briefing on
10 the appropriate form of relief.

11 BACKGROUND

12 On May 25, 1995, Defendant, the Animal and Plant Health
13 Inspection Service ("APHIS") of the United States Department of
14 Agriculture, promulgated regulations governing the importation of
15 logs, lumber, and other unmanufactured wood articles into the
16 United States. See 7 C.F.R. § 319.40. It issued these
17 regulations pursuant to the Federal Plant Pest Act ("FPPA"), 7
18 U.S.C. § 150aa et seq., and the Plant Quarantine Act ("PQA"), 7
19 U.S.C. § 151 et seq. Prior to promulgating the regulations,
20 Defendant issued an Environmental Impact Statement ("EIS")
21 describing the environmental consequences of the proposed
22 regulations and a range of alternatives to the regulations, as
23 required by the National Environmental Policy Act ("NEPA"), 42
24 U.S.C. § 4321 et seq., and the Council of Environmental Quality
25 ("CEQ"), 40 C.F.R. pt. 1500 et seq.

26 In two related actions, Plaintiffs, a number of environmental
27 organizations, are challenging both the adequacy of the EIS under
28 NEPA and the legality of the regulations under FPPA and PQA. The

1 Court has allowed the American Forest and Paper Association and
2 the Forest Products Association ("Intervenors") to intervene as
3 defendants with respect to Plaintiffs' challenge to the
4 regulations and their request for injunctive relief. It also
5 permitted Intervenors to file an amicus brief with respect to
6 Plaintiffs' NEPA challenge. Order, Aug. 20, 1996.

7 Plaintiffs fault the EIS for failing to discuss all the
8 significant environmental impacts of the regulations and the
9 alternatives. Its failure to discuss the environmental impacts,
10 Plaintiffs argue, skewed the analysis in the EIS in favor of those
11 alternatives that imposed fewer control measures and were less
12 restrictive of trade.

13 Plaintiffs argue that the regulations are improper because
14 they are designed to reduce the risk of the introduction of exotic
15 plant pests to a "negligible" or "insignificant" level.
16 Plaintiffs contend that FPPA and PQA impose a duty on Defendant to
17 do everything it can to reduce this risk to zero. Trade
18 considerations, according to Plaintiffs, are legally irrelevant,
19 and therefore it was an abuse of discretion for Defendant to take
20 them into account.

21 Plaintiffs and Defendant have filed cross-motions for summary
22 judgment on the NEPA claim and the FPPA and PQA claims.
23 Plaintiffs request that the Court delay consideration of
24 appropriate relief until after it has decided the motions for
25 summary judgment.

26 DISCUSSION

27 I. Standard for Granting Summary Judgment

28 Summary judgment is properly granted when no genuine and

1 disputed issues of material fact remain, and when, viewing the
2 evidence most favorably to the non-moving party, the movant is
3 clearly entitled to prevail as a matter of law. Fed. R. Civ. P.
4 56; Celotex Corp. v. Catrett, 477 U.S. 317, 322-23 (1986);
5 Eisenberg v. Insurance Co. of North America, 815 F.2d 1285, 1288-
6 89 (9th Cir. 1987).

7 The moving party bears the burden of showing that there is no
8 material factual dispute. Therefore, the Court must regard as
9 true the opposing party's evidence, if supported by affidavits or
10 other evidentiary material. Celotex, 477 U.S. at 324; Eisenberg,
11 815 F.2d at 1289. The Court must draw all reasonable inferences
12 in favor of the party against whom summary judgment is sought.
13 Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574,
14 587 (1986); Intel Corp. v. Hartford Accident and Indem. Co., 952
15 F.2d 1551, 1558 (9th Cir. 1991).

16 Material facts which would preclude entry of summary judgment
17 are those which, under applicable substantive law, may affect the
18 outcome of the case. The substantive law will identify which
19 facts are material. Anderson v. Liberty Lobby, Inc., 477 U.S.
20 242, 248 (1986).

21 II. Standing and Ripeness

22 Intervenor's contend that Plaintiffs lack standing to
23 challenge either the regulations or the EIS. To challenge an
24 agency action in federal court, Plaintiffs must satisfy both the
25 constitutional and the statutory requirements for standing. As a
26 constitutional minimum, Plaintiffs must establish that they have
27 suffered an injury in fact, that the alleged injury is fairly
28 traceable to the challenged agency action, and that judicial

1 relief is likely to redress the injury. Lujan v. Defenders of
2 Wildlife, 504 U.S. 555, 560-61 (1992); Douglas County v. Babbitt,
3 48 F.3d 1495, 1499 (9th Cir. 1995), cert. denied, 116 S. Ct. 698
4 (1996). Because Plaintiffs are bringing suit pursuant to the
5 Administrative Procedure Act ("APA"), 5 U.S.C. § 500 et seq., they
6 must also establish that their injury is the result of a final
7 agency action and that it falls within the "zone of interest"
8 Congress intended the underlying statute to protect. 5 U.S.C.
9 §§ 702, 704; Salmon River Concerned Citizens v. Robertson, 32 F.3d
10 1346, 1353-54 (9th Cir. 1994). On summary judgment, Plaintiffs
11 must submit affidavits showing that they satisfy each element of
12 standing. Lujan v. National Wildlife Fed'n, 497 U.S. 871, 884-89
13 (1990).

14 Plaintiffs are pressing two claims. One, relying on NEPA,
15 asserts that the EIS is inadequate. The other, relying on FPPA
16 and PQA, challenges the validity of the regulations themselves.
17 Because the two claims rely on different statutes and assert
18 different injuries, the standing analysis differs for the two.

19 A. Standing under NEPA

20 Plaintiffs have established the first constitutional
21 requirement for standing, injury-in-fact. To establish injury-in-
22 fact under NEPA, Plaintiffs must show that the federal action has
23 some direct, individualized impact on the challengers. Defenders
24 of Wildlife, 504 U.S. at 572 n.7. Plaintiffs submitted
25 declarations with their reply brief which establish that their
26 members recreate and engage in economic activity in forests that
27 face a risk of infestation caused by imported wood products.
28 Members of Plaintiff organizations own woodland plots located

1 close to ports, railroads, or major highways through which
2 significant quantities of imported timber would be transported.
3 Ball Decl., Burkhardt Decl., Clary Decl., Lamers Decl., Phillips
4 Decl., Wawona Decl. Members also engage in a variety of economic
5 activities that depend upon the health of forests in Oregon and
6 northern California. Ball Decl., Clary Decl., Lamers Decl.,
7 Phillips Decl., Wawona Decl. Many of these forests are located
8 near major ports of entry for wood products. The declarations
9 also establish that many members regularly engage in a variety of
10 recreational and research activities in forests located in
11 California, Oregon, and Siberia. Plaintiff organizations rely
12 upon the NEPA process for their lobbying and educational
13 activities. Ball Decl., Clary Decl., Gordon Decl., Heiken Decl.,
14 McKay Decl.

15 These declarations thus establish that members of Plaintiff
16 organizations regularly engage in activities that depend upon the
17 health of forests. Furthermore, they identify particular forests
18 that, because of their location, face the most immediate risk of
19 infestation. Plaintiffs have thus established that they have
20 concrete, individualized interests that are affected by
21 governmental safeguards against infestation.

22 Plaintiffs have also established causation and
23 redressability. An inadequate EIS would be the immediate cause of
24 Plaintiffs' procedural injury and a court order could redress that
25 injury.

26 Intervenorors contend that Plaintiffs have not satisfied the
27 injury-in-fact or the causation components of standing.

28 Intervenorors argue that Plaintiffs should wait to challenge a local

1 or regional action that more narrowly targets the forests of
2 northern California and Oregon. Intervenor's contend that
3 Plaintiffs cannot show particularized injury and causation
4 resulting from general national regulations. The case they rely
5 upon, however, is factually quite distinct from the circumstances
6 here. In Florida Audubon Society v. Bentsen, 94 F.3d 658 (D.C.
7 Cir. 1996) (en banc), the plaintiffs challenged the Treasury
8 Department's determination that a decision on tax credits for
9 fuels containing ethanol was categorically exempt from the
10 environmental review process. The plaintiffs argued that the tax
11 exemption would encourage more cultivation of corn, which in turn
12 would encourage the conversion of more wetlands into farmland.
13 The D.C. Circuit held that the plaintiffs failed to demonstrate
14 that the regulations would affect the particular wetlands that the
15 plaintiffs were seeking to protect. Id. at 664-66. Because the
16 plaintiffs failed to demonstrate that the regulations would affect
17 their own, particularized interests, they lacked standing to
18 challenge the regulations. Id. at 666.

19 Unlike the plaintiffs in Florida Audubon, Plaintiffs here
20 have shown that the particular forests in which they live, work,
21 and recreate are likely to be affected by the importation of
22 infested foreign logs. For example, Plaintiffs maintain that
23 Arcata, California, is a major port of entry for foreign logs.
24 Many members of Plaintiff organizations live near Arcata and are
25 thus likely to be affected if APHIS's regulations prove
26 inadequate. Plaintiffs thus have standing even under the D.C.
27 Circuit's stringent test for standing under NEPA. Compare Florida
28 Audubon, 94 F.3d at 664-66, with Douglas County, 48 F.3d 1495,

1 1500-01 (9th Cir. 1995).

2 Intervenor also assert that Plaintiffs' fears of infestation
3 are too speculative to confer standing. The normal standing
4 requirements of redressability and immediacy, however, are
5 loosened when procedural violations are alleged. Defenders of
6 Wildlife, 504 U.S. at 572 n.7. Plaintiffs have adequately
7 demonstrated that they have a direct stake in resources that would
8 be adversely affected by inadequate safeguards against infestation
9 from abroad. The substantive question of whether Plaintiffs'
10 fears are too speculative goes to the merits of the EIS rather
11 than to their standing to challenge the EIS.

12 Intervenor's final objection to Plaintiffs' standing to
13 challenge the EIS misconstrues the role of NEPA in agency
14 decision-making. Intervenor argues that Plaintiffs lack standing
15 because the regulations tightened restrictions on the import of
16 logs and that therefore the injury Plaintiffs complain of is less
17 likely to occur because of the very regulations they are
18 challenging. NEPA, however, is more concerned with the manner in
19 which agencies make decisions than with the ultimate outcome of
20 the decision-making process. Salmon River, 32 F.3d at 1355-56.
21 The relevant injury in an action to enforce NEPA is the agency's
22 failure to consider the environmental consequences of a proposed
23 action. Intervenor's final objection is thus irrelevant to
24 Plaintiffs' standing to challenge the EIS.

25 Plaintiffs satisfy the constitutional requirements for
26 standing to challenge the adequacy of the EIS. Intervenor does not
27 argue that Plaintiffs fall outside the zone of interests protected
28 by NEPA. Plaintiffs therefore have both constitutional and

1 statutory standing under NEPA.¹

2 B. Ripeness and Standing to Challenge Regulations

3 1. Ripeness

4 Intervenor's contend that Plaintiffs' claim against the
5 regulations is not yet ripe. Plaintiffs' challenge is ripe for
6 adjudication. The regulations are already in effect and the
7 administrative record is complete. Because Plaintiffs' challenge
8 is based upon the legal question of whether APHIS chose the proper
9 standard in drafting the regulations, the Court does not require a
10 more fully developed factual record about the manner in which
11 Defendant will enforce the regulations.

12 The ripeness cases Intervenor's cite are inapposite. None
13 involve a situation in which a particular regulation was already
14 being enforced. See Reno v. Catholic Social Servs., Inc., 113 S.
15 Ct. 2485 (1993) (challenge to I.N.S. regulations concerning
16 establishment of residency not ripe because agency had not yet
17 rejected applications); National Wildlife Fed'n, 497 U.S. 871
18 (1990) (policy regarding land sales did not itself constitute
19 agency action reviewable under NEPA); Louisiana Envtl. Action
20 Network v. Browner, 87 F.3d 1379 (D.C. Cir. 1996) (challenge to
21 E.P.A. process for approving state air pollution plans not ripe
22 because no particular state plan yet in question). Intervenor's
23 ripeness argument therefore fails.

24 \\\

26 ¹In addition to challenging Plaintiffs' standing to assert
27 violations of NEPA at all, Intervenor's attack Plaintiffs' standing
28 to raise particular criticisms of the EIS. Plaintiffs' standing to
raise those criticisms is discussed in the context of those
criticisms.

1 2. Standing

2 Plaintiffs' claim that the regulations do not comply with
3 FPPA and PQA raises distinct issues of standing. Because they are
4 attacking the substantive contents of the regulations, they do not
5 enjoy the relaxed standing requirements that apply to procedural
6 injuries. See Defenders of Wildlife, 504 U.S. at 572 n.7.
7 Intervenors argue that Plaintiffs lack standing to challenge the
8 regulations because they do not face imminent injury. In
9 particular, they contend that Plaintiffs have failed to show that
10 importation under the new regulations "will certainly introduce
11 pests that injure Plaintiffs' environmental interests."

12 Plaintiffs, however, have submitted declarations by
13 acknowledged experts in the field indicating that exotic pests are
14 likely to be introduced into American forests because of the new
15 regulations. Intervenors dispute Plaintiffs' evidence, but, on a
16 motion for summary judgment, Plaintiffs are only required to set
17 forth by affidavit or other evidence specific facts, which will be
18 taken to be true for the purposes of the motion. See id. at 561.
19 Because Plaintiffs have submitted evidence indicating that the
20 risk of infestation will increase under the new regulations, they
21 have standing to challenge the legal standard used in drafting the
22 regulations.

23 III. NEPA Challenge

24 A. Standard of Review under NEPA

25 "The primary purpose of an [EIS] is to serve as an action
26 forcing device" to ensure that environmental protection is
27 "infused into the ongoing programs and actions of the Federal
28 Government." 40 C.F.R. § 1502.1. An EIS does this by encouraging

1 the agency to consider all relevant information about the
2 environmental impacts of an agency action before embarking on that
3 course of action. Salmon River, 32 F.3d at 1356. Although NEPA
4 is meant to encourage environmentally sensitive decision-making,
5 it imposes only procedural requirements. It does not dictate any
6 particular substantive results. Id., at 1355-56 (citing Vermont
7 Yankee Nuclear Power Corp. v. Natural Resources Defense Council,
8 435 U.S. 519, 558 (1978), and Marsh v. Oregon Natural Resources
9 Council, 490 U.S. 360, 371 (1989)).

10 Because NEPA is primarily a procedural statute, the APA
11 governs district court review of an EIS. Id.; 5 U.S.C. §
12 706(2)(D). The Court may set aside agency action if it was
13 undertaken "without observance of procedure required by law." 5
14 U.S.C. § 706(2)(D). Although the Court should defer to agency
15 expertise, it must determine "'whether the [EIS] contains a
16 reasonably thorough discussion of the significant aspects of the
17 probable environmental consequences'" of the agency's action. Id.
18 (quoting California v. Block, 690 F.2d 753, 761 (9th Cir. 1982)).
19 The Court may not "fly speck" for "inconsequential, technical
20 deficiencies," but it must ensure that the agency took a "hard
21 look" at the action's environmental consequences. Idaho
22 Conservation League v. Mumma, 956 F.2d 1508, 1519 (9th Cir. 1992).
23 The Court must therefore make "'a pragmatic judgment whether the
24 [EIS'] form, content and preparation foster both informed
25 decision-making and informed public participation.'" Salmon
26 River, 32 F.3d at 1356 (quoting California, 690 F.2d at 761).

27 B. Motion to Strike Extra-Record Documents

28 As an initial matter, Defendant contends that the Court may

1 not consider various declarations that Plaintiffs have submitted
2 to illustrate the inadequacy of the EIS and the invalidity of the
3 regulations. Courts generally must limit their review of agency
4 action to the administrative record. Florida Power & Light Co. v.
5 Lorion, 470 U.S. 729, 743 (1985); Friends of the Payette v.
6 Horseshoe Bend Hydroelectric Co., 988 F.2d 989, 997 (9th Cir.
7 1993); Asarco, Inc. v. EPA, 616 F.2d 1153, 1159-60 (9th Cir.
8 1980). Courts may consider evidence from outside the record in
9 certain limited situations: if necessary to explain agency
10 action, if the agency has relied on documents not in the record,
11 if necessary to explain technical terms or complex subject matter,
12 or if the agency made its decision in bad faith. Animal Defense
13 Council v. Hodel, 840 F.2d 1432, 1436-37 (9th Cir. 1988), opinion
14 amended, 867 F.2d 1244 (9th Cir. 1989).

15 Plaintiffs contend that their declarations will assist the
16 Court in its understanding of technical issues pertaining to the
17 regulations. The Court may use extra-record information as
18 background material to assist it in engaging in a substantial
19 inquiry into the agency's action. Asarco, 616 F.2d at 1160. It
20 may not rely on this information, however, to evaluate the
21 correctness of the agency's decision. Id.

22 Plaintiffs also maintain that the declarations point out
23 relevant factors that APHIS should have considered but did not.
24 The Court may consider extra-record documents when they are
25 necessary to understanding the action an agency took. As part of
26 this inquiry, the Court may consider information to determine if
27 APHIS considered the relevant factors. Love v. Thomas, 858 F.2d
28 1347, 1356-57 (9th Cir. 1988), cert. denied, 490 U.S. 1035 (1989).

1 The Court, however, must be alert to belated attempts to raise
2 issues that Plaintiffs could and should have raised during the
3 public comment periods on the EIS and the regulations. Havasupai
4 Tribe v. Robertson, 943 F.2d 32, 34 (9th Cir. 1991), cert. denied,
5 503 U.S. 959 (1992).

6 Except when explicitly noted, the Court will therefore
7 confine its review to the administrative record.

8 C. Adequacy of EIS

9 Plaintiffs' criticisms of the EIS fall into five broad
10 categories: first, that the EIS largely serves as a justification
11 for decisions that had already been made; second, that the
12 preferred alternative in the EIS is based on an unexamined
13 assumption that individually ineffective measures will be
14 effective collectively; third, that the EIS omitted or failed to
15 disclose significant information; fourth, that the EIS failed to
16 discuss the relation between the proposed regulations and other
17 environmental laws and policies; and, fifth, that the EIS failed
18 to discuss the differing environmental impacts of the various
19 alternatives.

20 1. EIS as Justification for Decisions Already Made

21 Plaintiffs contend that the EIS assumes without examination
22 that importation of wood products will increase. This assumption,
23 they argue, skews the analysis in the EIS because all of the
24 alternatives except for the alternative of doing nothing at all
25 appear to be an improvement upon the status quo. According to
26 Plaintiffs, this assumption violates NEPA because it reflects a
27 prior agency decision to change the previous presumption of the
28 "nonenterability" of wood products to a presumption of

1 "enterability." This presumption was changed, argue Plaintiffs,
2 without the benefit of environmental analysis or public comment.

3 Plaintiffs correctly observe that an EIS should assess the
4 environmental impact of a proposed agency action rather than
5 simply justify a decision that has already been made. 40 C.F.R. §
6 1502.2(g). The EIS should also foster public participation in the
7 decision-making process. Salmon River, 32 F.3d at 1356.

8 Plaintiffs, however, incorrectly characterize APHIS' policy
9 before the promulgation of these regulations. Plaintiffs contend
10 that the agency had a presumption against the "enterability" of
11 wood products into the United States. The documents upon which
12 Plaintiffs rely, however, do not support this assertion. The 1987
13 working plan they cite does contain references to "zero tolerance"
14 for the importation of infested wood products, but this only
15 applied to specific items that were actually suspected to harbor
16 pests. Zero tolerance did not take the form of a blanket ban on
17 the import of wood products. 28 AR 10725, 10732.

18 Furthermore, the 1993 Office of Technology Assessment (OTA)
19 study actually contradicts Plaintiffs' assertions that APHIS had a
20 presumption against the enterability of wood products. Indeed,
21 the study criticized APHIS for presuming that wood products were
22 safe and therefore should be allowed free entry into the United
23 States. The study advocated that importers should be required to
24 show the safety of their products. Dollinger Decl., Ex. A., at
25 115-17.

26 Because Plaintiffs fail to show that APHIS changed its policy
27 with regard to wood imports before the EIS was conducted, their
28 first criticism fails to demonstrate the inadequacy of the EIS.

2. The EIS' Assumption that Individually Ineffective Measures Will Be Effective Collectively

Plaintiffs next attack the EIS for assuming that the combination of mitigation measures is "sufficient to successfully mitigate the introduction of plant pest species." See 7 AR 2190 (EIS, at 25). Plaintiffs point out that no individual mitigation measure eliminates all pests and prevents reinfestation. They also note that Defendant fails to cite any studies or documentation for its belief that the combination of different mitigation measures will successfully mitigate the introduction of pests. Because Defendant relies on this assumption to justify its selection of the preferred alternative, Plaintiffs conclude that the EIS is inadequate.

Plaintiffs' dispute with Defendant is semantic. Plaintiffs interpret "successfully mitigate" to mean that the combination of measures will prevent the importation of non-native pests. Defendant, citing Webster's Dictionary, argues that "mitigation" simply means to make something milder or less severe. Plaintiffs respond that "successful mitigation," if it means anything at all, means more than the statement that two control measures are likely to be better than one.

Although, as explained below, the Court does not accept Plaintiffs' assertion that regulations of wood products must entirely prevent the importation of pests, Defendant may not gloss over the considerable uncertainty about the effectiveness of different mitigation measures. The EIS and the regulations are based on the assumption that the combination of different mitigation measures will compensate for the inadequacies of each.

1 Defendant's unexplained statement that a combination of measures
2 will "successfully mitigate the introduction" of pests obscures
3 this uncertainty.

4 Defendant contends that heat treatment, by itself, can be
5 completely effective at eradicating pests. Plaintiffs concede
6 this point, but point out that heat treatment does not prevent
7 reinfestation. Furthermore, the regulations do not require heat
8 treatment of all wood products. For example, temperate hardwood
9 logs and lumber from areas other than northern Asia only need to
10 be debarked, fumigated, and visually inspected. In any event, the
11 effectiveness of heat treatment does not rectify the fundamental
12 problem here, which is that the EIS obscures rather than
13 highlights the uncertainties that remain even when different
14 measures are used in combination.

15 Given that the purposes of the EIS are to foster informed
16 decision-making and promote public participation, Defendant's
17 failure to point out the considerable uncertainty surrounding its
18 belief that a combination of measures will be effective renders
19 this portion of the EIS inadequate. See Seattle Audubon Soc'y v.
20 Moseley, 798 F. Supp. 1473, 1478-79 (W.D. Wash. 1992) ("An agency
21 must candidly disclose in its EIS the risks posed by its proposed
22 action. Otherwise the EIS cannot serve its purpose of informing
23 the decisionmaker and the public before the decision to proceed is
24 made.") (quoting Friends of the Earth v. Hall, 693 F. Supp. 904,
25 937 (W.D. Wash. 1988), aff'd in part, appeal dismissed in part,
26 998 F.2d 699 (9th Cir. 1993).

27 3. Omission of Important Information

28 Federal agencies must disclose when information relevant to

1 the analysis of a significant adverse effect on the environment is
2 incomplete or unavailable. 40 C.F.R. § 1502.22. When the missing
3 information is essential to making a reasoned choice among the
4 alternatives, the agency must obtain that information unless the
5 overall costs of obtaining it are exorbitant. 40 C.F.R. §
6 1502.22(a). When the costs of obtaining the information are
7 exorbitant or the means of attaining it are unknown, the agency
8 must disclose that significant information is missing and discuss
9 the evidence that is available. 40 C.F.R. § 1502.22(b).

10 Plaintiffs contend that Defendant has omitted, or failed to
11 disclose the lack of, important information in the EIS.

12 a. Uncertainty About Adequacy of Risk Assessment

13 Plaintiffs fault the EIS for failing to convey the
14 considerable uncertainty about the adequacy of the risk
15 assessments upon which the EIS and regulations are largely based.
16 Scientists reviewing these risk assessments expressed considerable
17 doubts about the adequacy of the assessments. For example, the
18 risk assessments were criticized for failing to investigate
19 currently unknown risks. 9 AR 2783, 10 AR 3438-40. It is, of
20 course, difficult to investigate the unknown, but scientists
21 pointed out that many of the most destructive exotic pests in the
22 United States are relatively benign in their regions of origin.

23 Defendant counters that the risk assessments did not, and
24 were not meant to, consider the adequacy of control measures.
25 Uncertainty surrounding risk assessment thus has little bearing on
26 the adequacy of the safeguards described in the EIS, they argue.
27 The adequacy of control measures, however, cannot so simply be
28 segregated from the adequacy of underlying risk assessments. It

1 is difficult for the public to assess the regulatory framework
2 proposed in the EIS if it is not informed of the significant
3 uncertainty about the scope of the risk that the regulations seek
4 to contain.

5 Some of the APHIS studies also stress the urgent need for
6 additional research to fill in significant gaps in knowledge about
7 the efficacy of various control measures. 9 AR 2929, 23 AR 8538.

8 The failure of the EIS to discuss in a significant manner the
9 uncertainties about the risks of infestation and the adequacy of
10 control measures skews its portrayal of the risks associated with
11 the preferred alternative. This skewed portrayal limits the
12 usefulness of the EIS to public participation and informed
13 decision-making.

14 b. Compliance by Exporting Countries

15 To a great extent, the preferred alternative depends upon
16 self-certification by importers or upon certification by the
17 national governments of exporters. Plaintiffs criticize the EIS
18 for failing to evaluate the risk of systematic noncompliance by
19 importers and foreign governments. Defendant responds that this
20 is a problem of human honesty falling beyond the scope of an EIS.
21 In any event, it maintains that it addressed this concern in their
22 response to comments on the draft EIS.

23 Although 40 C.F.R. § 1502.22 is primarily concerned with
24 scientific uncertainty, problems with compliance would
25 significantly affect the effectiveness of the control measures.
26 APHIS thus may not dismiss compliance problems as a simple problem
27 of human honesty lying beyond the scope of the EIS. Defendant's
28 brief response in the appendix of the EIS to comments about

1 problems with compliance does not constitute an adequate
2 evaluation of how compliance problems abroad may limit the
3 effectiveness of the preferred alternative. See 7 AR 2262.

4 c. Environmental Impacts of Mitigation Measures

5 Plaintiffs fault the EIS for failing to discuss the
6 environmental impacts of efforts to eradicate exotic pests should
7 they survive the control measures. In particular, they criticize
8 the EIS for failing to discuss the impacts of efforts to eradicate
9 fungi and for refusing to discuss human health impacts of
10 eradication efforts.

11 Plaintiffs rely on the declaration of their own expert to
12 establish that the EIS failed to discuss the ineffectiveness of
13 eradication efforts against fungi and to disclose that the usual
14 method of eradicating fungi is large-scale tree removal. The EIS
15 does note that methods of eradicating many pests are either
16 unknown or infeasible. It also contains significant discussion of
17 the environmental impacts of pesticide applications. It does not
18 contain an explicit discussion of the particular problems
19 associated with the eradication of fungal pests. Plaintiffs,
20 however, had adequate opportunity to raise this omission during
21 the public comment period. As discussed above, they cannot now
22 belatedly fault the EIS when they had the opportunity to alert the
23 agency to this defect during the NEPA process.

24 Plaintiffs also criticize the EIS for refusing to discuss the
25 human health consequences of eradication efforts relying on
26 widespread application of pesticides. Defendant correctly
27 maintains that detailed discussion of the human health
28 consequences of eradication efforts can only be conducted in the

1 context of a particular eradication effort. Their blanket refusal
2 to discuss the health implications of eradication efforts at all,
3 however, is unjustified. Defendant properly included a fairly
4 extended, though general, discussion of the range of environmental
5 consequences that can accompany application of pesticides to
6 forests. It does not explain why it cannot include a comparable
7 discussion of the range of human health consequences of pesticide
8 applications. Because this omission minimizes the potential
9 consequences of looser import restrictions, it biases the EIS in
10 favor of the preferred alternative.

11 d. Exclusion of Cost-Benefit Analysis

12 Plaintiffs also maintain that the EIS is inadequate because
13 it omits the economic analysis that APHIS conducted on the
14 regulations. Title 40 C.F.R. § 1502.23 provides that when an
15 agency performs a cost-benefit analysis relevant to the choice
16 "among environmentally different alternatives," the analysis
17 "shall be incorporated by reference or appended to the statement."
18 Here, Defendant attached to the draft EIS the Federal Register
19 announcement of the proposed rules, which included a description
20 of the preliminary findings of the economic analysis. Interested
21 parties thus had an opportunity to comment on those preliminary
22 findings.

23 Plaintiffs observe that the economic analysis was not
24 completed until one year after the final EIS was published.
25 Failure to include this analysis with the final EIS, they assert,
26 violates section 1502.23. The NEPA regulations, however, do not
27 require inclusion of a cost-benefit analysis with an EIS. Here,
28 the economic analysis was not completed at the time of the EIS so

1 it could not have been included. The inclusion of the preliminary
2 findings of the economic analysis in the draft EIS satisfies the
3 requirements of section 1502.23.

4 4. How Alternatives Will Achieve Requirements of Other
5 Environmental Policies

6 In addition to the various failures to disclose discussed
7 above, Plaintiffs contend that the EIS fails to explain how the
8 preferred alternative will achieve the requirements of other
9 environmental laws and policies. See 40 C.F.R. § 1502.2(d).

10 a. The Clean Air Act and the Montreal Protocol

11 Plaintiffs fault the EIS for failing to explain how the use
12 of the pesticide methyl bromide achieves the requirements of the
13 Clean Air Act and the Copenhagen Amendments to the Montreal
14 Protocol on ozone depletion. Clean Air Act regulations have
15 frozen production and consumption levels of methyl bromide and
16 call for the termination of production and consumption by the year
17 2001. 42 U.S.C. § 7671c, 40 C.F.R. § 82.4. The preferred
18 alternative and the regulations as promulgated rely on methyl
19 bromide for fumigation. They leave open the possibility of
20 developing alternatives, but methyl bromide is the only pesticide
21 discussed in detail.

22 Although the EIS does discuss the restrictions the Clean Air
23 Act and the Montreal Protocol impose on methyl bromide, Plaintiffs
24 criticize it for failing to state how the proposed alternative
25 will comply with the requirements of the Clean Air Act and the
26 Montreal Protocol. Section 1502.2, however, does not require that
27 the preferred alternative actually advance other environmental
28 laws or policies. It simply requires the EIS to state how it

1 "will or will not achieve" those policies.

2 Here, the EIS contains extensive discussion of the
3 anticipated uses of methyl bromide, of the environmental
4 consequences of methyl bromide use, and of the Clean Air Act and
5 Montreal Protocol restrictions. The EIS does seek to place the
6 preferred alternative's reliance on methyl bromide in the most
7 benign possible light. Plaintiffs' substantive criticism,
8 however, is not the failure of the EIS to disclose information,
9 but rather its failure explicitly to state that the preferred
10 alternative conflicts with the Clean Air Act and the Montreal
11 Protocol. Although the EIS does not explicitly enunciate the
12 conflict between reliance on methyl bromide and laws designed to
13 protect the ozone layer, it does present information which makes
14 this conflict clear. Plaintiffs and the EPA, see 8 AR 2534, may
15 regret that the preferred alternative is difficult to reconcile
16 with Clean Air Act regulations, but NEPA does not mandate any
17 particular substantive result. It is clear from the EIS that
18 methyl bromide use is inconsistent with policies concerning
19 protection of the ozone layer. NEPA regulations do not require
20 anything more.

21 b. State and Tribal Policies

22 Plaintiffs argue that 40 C.F.R. § 1502.16(c) requires
23 Defendant to disclose "any potential conflicts with other federal,
24 state, or tribal land use plans or environmental controls." Reply
25 Brief, at 24 (emphasis added). Section 1502.16(c), however, only
26 requires disclosure of conflicts with land use plans, policies and
27 controls. The regulations here do not affect state or tribal
28 regulation of land use; therefore section 1502.16(c) does not

1 apply.

2 Plaintiffs also point out that Defendant does not appear to
3 have complied with 40 C.F.R. § 1503.1(a)(2)(ii), which requires
4 federal agencies to request comments from Indian tribes when an
5 action may affect reservations. Defendant contends that
6 Plaintiffs do not have standing to raise this objection because
7 they are not tribes. Plaintiffs respond that the agency's duty to
8 solicit tribal comments is a procedural requirement meant to
9 improve the quality of the EIS. Failure to solicit tribal
10 comments would thus interfere with their right to an adequate EIS.
11 The language of the regulation, however, indicates that the duty
12 to solicit tribal comments only applies when an action may affect
13 reservations. This implies that the duty to solicit tribal
14 comments is primarily a means of protecting tribal interests, not
15 a means of ensuring the overall quality of an EIS. Because
16 Plaintiffs do not fall within the zone of interests this
17 particular provision protects, they lack standing to press this
18 criticism.

19 c. Extraterritorial Impact

20 Plaintiffs contend that Defendant violated Executive Order
21 ("E.O.") 12114 by failing to evaluate the effects of the
22 regulations on forests in other countries. The executive order,
23 however, expressly establishes that "nothing in this Order shall
24 be construed to create a cause of action." E.O. 12114 § 3-1. The
25 District of Columbia Circuit has interpreted this provision as
26 prohibiting private lawsuits that challenge agency actions for
27 failure to comply with the executive order's mandates.
28 Environmental Defense Fund, Inc. v. Massey, 986 F.2d 528, 530

(D.C. Cir. 1993). Plaintiffs have cited no cases allowing challenges based upon E.O. 12114.² The Court therefore finds that Plaintiffs may not challenge the EIS on the basis of an alleged failure to comply with E.O. 12114.

In their reply brief, Plaintiffs argued that NEPA itself requires Defendant to consider the extraterritorial effects of agency actions. The cases they cite, however, do not hold that an EIS must consider the environmental effects of domestic actions on the environment of another nation. See Greenpeace USA v. Stone, 748 F. Supp. 749 (D. Haw. 1990) ("Congress intended to encourage federal agencies to consider the global impact of domestic actions and may have intended under certain circumstances for NEPA to apply extraterritorially"), appeal dismissed, 924 F.2d 175 (9th Cir. 1991); National Org. for the Reform of Marijuana Laws v. Department of State, 452 F. Supp. 1226, 1233 (D.D.C. 1978) (EIS inadequate because it failed to consider domestic environmental effects of herbicide application in Mexico). Plaintiffs have therefore failed to establish that the EIS is required to consider the extraterritorial consequences of the regulations.³

5. Comparison of the Environmental Impacts of the Alternatives

Plaintiffs also fault the EIS for failing to discuss the

²Plaintiffs cite one case for the proposition that the APA creates a cause of action to bring suit on the basis of violations of an executive order. Sierra Club v. Peterson, 705 F.2d 1475, 1478 n.4 (9th Cir. 1983). The executive order at issue in Sierra Club, however, was apparently silent about the possibility of bringing a private cause of action to enforce its terms.

³The Court does not hold that NEPA only requires consideration of the domestic environmental impacts of domestic actions. It merely holds that Plaintiffs have failed to establish that NEPA requires consideration of extraterritorial effects.

1 different environmental impacts of the individual alternatives.
2 In particular, they criticize Defendant's statement that "the
3 environmental impacts attributable to the six alternatives are
4 virtually identical and depend entirely upon the degree to which
5 plant pests are excluded." EIS, at 38; 7 AR 2198. This failure
6 to differentiate among the environmental impacts of the various
7 alternatives, Plaintiffs contend, violates 40 C.F.R. § 1502.14.
8 Section 1502.14 provides that the EIS "should present the
9 environmental impacts of the proposal and the alternatives in
10 comparative form, thus sharply defining the issues and providing a
11 clear basis for choice among options by the decisionmaker and the
12 public."

13 Defendant maintains that the EIS did adequately address the
14 environmental impacts of all the alternatives. They assert that
15 the only the only distinguishing factor among the various
16 alternatives is their effectiveness at keeping pests out. Once a
17 pest has established itself in the United States, the
18 environmental consequences are the same. Defendant concludes that
19 the EIS appropriately limited its discussion of environmental
20 impacts to the varying degrees of effectiveness of the different
21 alternatives.

22 The analyst Defendant hired to evaluate the EIS, however,
23 disagreed. 10 AR 10200-01. The different alternatives, for
24 example, differ dramatically in the extent to which they rely on
25 use of methyl bromide. Also, different kinds of wood from
26 different parts of the world receive dramatically different
27 treatment. This may be justifiable, but the EIS itself does not
28 contain any explanation. In addition, the different treatment

1 methods are effective against different kinds of threats.
2 Fumigation, for example, may be effective against pests on or
3 close to the surface of a log, but is less effective against pests
4 in the center of a large log. 7 AR 2294.

5 The comparison of the environmental effects of the various
6 alternatives is supposed to be the heart of the EIS. 40 C.F.R. §
7 1502.14. Rather than sharply defining the issues and providing a
8 clear basis for choice among the alternatives, the EIS obscures
9 the differences by labeling them all a matter of degree. By
10 downplaying these differences, the EIS minimizes both the
11 environmental drawbacks of the more lenient alternatives and the
12 environmental benefits of some of the stricter alternatives. This
13 distortion impedes both public participation and agency decision-
14 making. The comparison of the environmental impacts of the
15 various alternatives is therefore inadequate.

16 In summary, Plaintiffs have established the inadequacy of the
17 EIS for the following reasons:

18 it assumes without examination that individually ineffective
19 control measures will be effective collectively;

20 it omits significant information concerning uncertainties
21 expressed in the risk assessments, concerning compliance by
22 exporting countries, and concerning the health consequences
23 of measures to mitigate infestations that may occur; and

24 it fails to discuss adequately the different environmental
25 impacts of the various alternatives.

26 IV. Validity of the Regulations under FPPA and PQA

27 In addition to challenging the adequacy of the EIS,
28 Plaintiffs also contend that the regulations as promulgated are
arbitrary, capricious, and not in accordance with law. See 5
U.S.C. § 706(2)(A), (C). Plaintiffs focus their attack on

1 Defendant's determination that the regulations only need to reduce
2 the risk of infestation to "negligible" levels. See 7 AR 2259, 8
3 AR 2556. Plaintiffs argue that the applicable statutes require
4 the regulations to create "zero risk" of infestation. They assert
5 that Defendant improperly ignored this statutory standard and
6 instead, when structuring the regulations, took into account trade
7 considerations that are irrelevant as a matter of law.

8 Defendant promulgated the regulations pursuant to the Federal
9 Plant Pest Act, 7 U.S.C. § 150aa et seq. ("FPPA"), and the Plant
10 Quarantine Act, 7 U.S.C. § 151 et seq. ("PQA"). FPPA provides
11 that the Secretary of Agriculture "may" promulgate regulations
12 imposing conditions upon the movement of products "as he deems
13 necessary to prevent the dissemination into the United States
14 . . . of plant pests." 7 U.S.C. § 150ee. PQA provides that the
15 Secretary shall issue regulations restricting importation from
16 "insect-infested localit[ies]" whenever the Secretary "shall
17 determine" that it is necessary "in order to prevent the
18 introduction" of exotic pests. 7 U.S.C. § 160.⁴ PQA further
19 authorizes the Secretary to "make and promulgate such rules and
20 regulations as may be necessary for carrying out the purposes of
21 [the statute]." 7 U.S.C. § 162.

22 _____
23 ⁴Section 160 reads in relevant part:
24 Whenever, in order to prevent the introduction into the United
25 States of any tree, plant, or fruit disease or of any injurious
26 insect, new to or not theretofore widely prevalent or distributed
27 within and throughout the United States, the Secretary of
28 Agriculture shall determine that it is necessary to forbid the
importation into the United States of any . . . class of plants
. . . or plant products from a country or locality where such
disease or insect infestation exists, he shall promulgate such
determination, specifying the country and locality and the . . .
class of plants . . . or other plant products which, in his
opinion, should be excluded.

1 Plaintiffs contend that Defendant ignored clear statutory
2 commands by framing the regulations in terms of reducing the risk
3 of infestation to negligible levels rather than reducing the risk
4 to zero. When congressional intent is clear, agencies and the
5 courts must give effect to that intent. Chevron, U.S.A., Inc. v.
6 Natural Resources Defense Council, 467 U.S. 837, 842-43 (1984).
7 When "Congress has not directly addressed the precise question at
8 issue," however, the court must determine if the agency's
9 interpretation is a permissible construction of the statute. Id.
10 at 843. If Congress left a gap for the agency to fill, the court
11 must defer to the agency's interpretation unless it is "arbitrary,
12 capricious, or manifestly contrary to the statute." Id. at 844.

13 Neither FPPA nor PQA directly address the question of what
14 degree of risk APHIS may tolerate when it issues regulations.
15 Plaintiffs stress language in the statutes concerning the
16 "prevention" of infestation. The various sections that Plaintiffs
17 cite, however, also clearly indicate regulatory discretion. Thus,
18 FPPA provides that the Secretary "may" promulgate regulations and
19 "may, whenever he deems it necessary as an emergency measure"
20 destroy infested products. 7 U.S.C. §§ 150ee, 150 dd(d). PQA
21 says the Secretary "may" promulgate regulations concerning nursery
22 stock and shall issue such rules and regulations as "may" be
23 necessary. 7 U.S.C. §§ 154(a), 162. Even section 160, which
24 comes closest to containing mandatory language, provides that
25 restrictions on importations from infested locales shall list
26 those products which "in his opinion" should be excluded.

27 At oral argument, counsel for Plaintiff Californians for
28 Alternatives to Toxics compared FPPA and PQA to the Delaney

1 Clause, 21 U.S.C. § 348(c)(3). The Delaney Clause forbade the use
2 of carcinogenic food additives, even when the risk of the additive
3 causing cancer in humans was thought to be "de minimis". Les v.
4 Reilly, 968 F.2d 985 (9th Cir. 1992), cert. denied, 507 U.S. 950
5 (1993).⁵ The language in the Delaney Clause, however, is more
6 absolute than the language in FPPA and PQA. It provides that "no
7 additive shall be deemed to be safe if it is found to induce
8 cancer." 21 U.S.C. § 348(c)(3) (emphasis added). In addition,
9 the legislative history clearly indicated that "Congress intended
10 to ban all carcinogenic food additives, regardless of amount or
11 significance of risk." Les, 968 F.2d at 989. Neither the
12 language nor the legislative history of FPPA and PQA indicate that
13 Congress intended to impose the kind of absolute ban that the
14 Delaney Clause imposed.

15 Because the statutes provide ample discretion to the
16 Secretary of Agriculture to determine when regulations,
17 quarantines, or other protective measures are necessary and
18 because Congress did not speak directly to the issue of
19 appropriate levels of risk, the Court concludes that Congress
20 delegated discretion to the Secretary to determine what level of
21 risk is consistent with the statutes' goals of preventing the
22 introduction and dissemination of plant pests from abroad.
23 Pursuant to Chevron, the Court therefore must defer to Defendant's
24 interpretation of FPPA and PQA unless their interpretation is
25 arbitrary, capricious, or manifestly contrary to the statutes.

27 ⁵The Food Quality Protection Act of 1996, Pub. L. No. 104-316,
28 110 Stat. 1489, changed the standard for evaluating potentially
carcinogenic additives.

1 Defendant bases its decision to attempt to reduce the risks
2 of infestation to a negligible level rather than to zero on two
3 factors. First, Defendant has concluded that it is impossible to
4 eliminate all possibility of infestation from abroad. 7 AR 2197.
5 Plaintiffs have not contested the accuracy of this determination.
6 They have rather contested Defendant's authority to make the
7 determination. Because Plaintiffs have not shown that the
8 agency's determination was itself arbitrary and capricious, the
9 Court declines to find that the agency erred in concluding that
10 the regulations need only aim for a negligible level of risk
11 rather than a level of "zero" risk.

12 Second, Defendant maintains that the North American Free
13 Trade Agreement ("NAFTA-SPS") and the General Agreement on Tariffs
14 and Trade ("GATT" or "WTO-SPS") prohibit APHIS from promulgating
15 regulations that "constitute a disguised restriction on
16 international trade." See NAFTA-SPS, art. 712-6; WTO-SPS,
17 art. 5-5. GATT elaborates that "a measure is not more trade-
18 restrictive than required unless there is another measure . . .
19 that achieves the appropriate level of sanitary or phytosanitary
20 protection and is significantly less restrictive to trade." WTO-
21 SPS, art. 5-6 n.3. Both agreements permit phytosanitary measures
22 "necessary" to protect the health of humans or plants and allow
23 individual countries to determine the appropriate level of
24 protection. NAFTA-SPS, art. 712-1; WTO-SPS, arts. 2, 5. When
25 determining the appropriate level of protection, members "should
26 . . . take into account the objective of minimizing negative trade
27 effects." NAFTA-SPS, art. 715-3; WTO-SPS, art. 5-4.

28 Although both GATT and NAFTA prohibit "disguised restrictions

1 on trade" and encourage countries to minimize negative effects on
2 trade when devising regulations to protect plant life, they do not
3 mandate any particular level of risk. They simply require that
4 the level be "appropriate" and based upon scientific
5 investigations. Defendant's implication that GATT and NAFTA
6 prevent APHIS from adopting a "zero risk" standard is thus
7 exaggerated. The agreements do, however, justify Defendant's
8 decision to consider effects on international trade when
9 formulating the regulations.

10 Plaintiffs correctly point out that the international
11 agreements do not prohibit adoption of restrictions that are
12 stricter than those imposed by the regulations. They err,
13 however, in arguing that APHIS should not have considered trade
14 when formulating the regulations. Plaintiffs maintain that the
15 only policy Defendant may consider when promulgating regulations
16 pursuant to FPPA and PQA is the prevention of the introduction and
17 dissemination of exotic plant pests. Although the policy of these
18 two statutes is clearly to prevent infestation, Plaintiffs cite no
19 statutory language, legislative history, or case law to support
20 their assertion that Defendant may not consider any policies other
21 than the prevention of infestation. Indeed, FPPA prohibits the
22 destruction, export, or return of infected products unless no less
23 drastic remedy is available. 7 U.S.C. § 150dd(d). This suggests
24 that economic efficiency may be an appropriate consideration when
25 the agency is formulating strategies to prevent the introduction
26 of exotic pests.

27 Because of the discretion FPPA and PQA confer on Defendant
28 and because of the policies established in GATT and NAFTA,

1 Defendant did not abuse its discretion by taking the effects on
2 international trade into account when devising the regulations.
3 Plaintiffs therefore have not established that Defendant's
4 negligible risk standard is arbitrary and capricious or manifestly
5 contrary to FPPA or PQA. See Chevron, 467 U.S. at 844.

6 Although the Regulations comply with FPPA and PQA, they are
7 based upon an inadequate EIS. The Court therefore denies
8 Defendant's motion for summary judgment on the validity of the
9 regulations.


10 CONCLUSION

11 For the foregoing reasons, Plaintiffs' motion is GRANTED with
12 respect to the Environmental Impact Statement and DENIED with
13 respect to the compliance of the Regulations with FPPA and PQA.
14 Defendant's motion is DENIED.

15 This order is not a final judgment, therefore Defendant shall
16 continue to enforce the current regulations. Plaintiffs shall
17 submit a motion concerning appropriate remedies within thirty
18 days.

19
20 IT IS SO ORDERED.

21
22 Dated: FEB 27 2001


CLAUDIA WILKEN
UNITED STATES DISTRICT JUDGE

23
24 Copies mailed to counsel
25 as noted on the following page
26
27
28

5TH CASE of Level 1 printed in FULL format.

OREGON NATURAL RESOURCES COUNCIL, et al., Plaintiffs, v. ANIMAL AND PLANT HEALTH INSPECTION SERVICE, an agency of the United States Department of Agriculture; Defendant. CALIFORNIANS FOR ALTERNATIVES TO TOXICS, et al., Plaintiffs, v. ANIMAL AND PLANT HEALTH INSPECTION SERVICE, et al., Defendants, and AMERICAN FOREST & PAPER ASSOCIATION; INDEPENDENT FOREST PRODUCTS ASSOCIATION, Intervenor-Defendants.

No. C 95-04066 CW

UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

1997 U.S. Dist. LEXIS 9521

June 5, 1997, Decided

June 5, 1997, FILED

DISPOSITION: [*1] Plaintiff ONRC'S motion for preliminary injunction GRANTED in part. Plaintiff CATS' motion for injunction and declaratory relief DENIED.

COUNSEL: For OREGON NATURAL RESOURCES COUNCIL, PACIFIC ENVIRONMENTAL AND RESOURCES CENTER, NORTHCOAST ENVIRONMENTAL CENTER, Plaintiffs: Nathaniel S.W. Lawrence, Natural Resources Defense Council, San Francisco, CA. Michael D. Axline, Western Environmental Law Center, Eugene, OR.

For ANIMAL AND PLANT HEALTH INSPECTION SERVICE, an agency of the United States Department of Agriculture, defendant: James A. Coda, U.S. Attorney's Office, San Francisco, CA. Robin Michael, U.S. Department of Justice, Environmental and Natural Resources Div., General Litigation Section, Washington, DC.

For AMERICAN FOREST & PAPER ASSOCIATION, INDEPENDENT FOREST PRODUCTS ASSOCIATION, Intervenor-Defendants: Mark D. Plevin, Crowell & Moring, Irvine, CA. J. Michael Klise, Crowell & Moring, Washington, DC.

JUDGES: CLAUDIA WILKEN, United States District Judge

OPINIONBY: CLAUDIA WILKEN

OPINION: ORDER GRANTING IN PART PLAINTIFF ONRC'S MOTION FOR PRELIMINARY INJUNCTION AND DENYING PLAINTIFF CATS' MOTION FOR INJUNCTION AND DECLARATORY RELIEF

Plaintiff Oregon Natural Resources Council, et al. ("ONRC") move for a preliminary injunction.

Plaintiffs Californians for Alternatives to Toxics, et al., ("CATS") move separately for an injunction and declaratory relief. Defendant Animal and Plant Health Inspection Service ("APHIS") and Intervenor American Forest and Paper Association and Independent Forest Products Association oppose both motions. The matter was heard on May 16, 1997. Having considered all of the papers filed by the parties and oral argument on the motion, the Court GRANTS ONRC's motion in part and DENIES CATS' motion.

BACKGROUND

In its February 27, 1997 Order, the Court found that the Environmental Impact Statement ("EIS") prepared for the APHIS regulations governing the importation of unmanufactured wood products ("Regulations"), 7 C.F.R. pt. 319.40, did not comply with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., or with Council on Environmental Quality ("CEQ") regulations, 40 C.F.R. pt. 1500 et seq. The Court, however, rejected Plaintiffs' argument that APHIS had applied an incorrect legal standard when framing the Regulations. The Court ordered the parties to submit briefing on the appropriate form of relief. [*3]

Plaintiff ONRC filed a motion for a preliminary injunction, requesting that the Court enjoin APHIS from issuing any new import permits under the Regulations until the agency complied with its obligations under NEPA. ONRC's proposed injunction would not prevent the import of wood products pursuant to the general permits granted in Title 7 C.F.R. § 319.40-3 nor would it rescind permits that have already been

granted under the Regulations. At oral argument, ONRC expressed particular concern about the anticipated commencement of large-scale imports of unfinished wood products from Mexican states that do not border the United States.

Plaintiff CATS filed a separate motion for a permanent injunction and declaratory relief. CATS seeks to enjoin APHIS from issuing new permits under the Regulations and to rescind the permits that have already been issued. In its reply brief, CATS clarified that it is not seeking to enjoin the general permit for imports from Canada and from Mexican states that border the United States. See 7 C.F.R. § 319.40-3(a).

APHIS and Intervenor oppose any injunction that would enjoin the issuance of new permits or rescind current permits.

DISCUSSION

I. [*4] Validity of the Permitting Provisions of the Regulations

CATS argues that the provisions of the Regulations which authorize APHIS to issue permits for the importation of unfinished wood products are invalid. CATS contends that the Regulations do not comply with APHIS' own interpretation of the Federal Plant Pest Act ("FPPA"), 7 U.S.C. § 150aa et seq., and the Plant Quarantine Act ("PQA"), 7 U.S.C. § 151 et seq., which is that the agency must ensure that imports pose only a "negligible risk" of introducing exotic pests into the United States. CATS maintains that the Court's findings concerning the inadequacy of the EIS establish that the permitting provisions of the Regulations will not reduce the risk of infestation from the importation of unfinished wood products to negligible levels.

The Court's analysis of the EIS does not by itself establish that the Regulations are arbitrary and capricious or contrary to law. The inadequacy of the EIS is a distinct issue from whether the administrative record demonstrates that the Regulations are substantively faulty. CATS has therefore failed to establish that the Regulations do not comply with APHIS' negligible risk standard.

II. [*5] Injunctive Relief

A. Equitable Discretion

APHIS concedes that it is required to prepare an environmental impact statement prior to promulgating regulations concerning the importation of unfin-

ished wood products. As explained in the Court's Order of February 27, 1997, the EIS prepared for the Regulations did not comply with CEQ requirements. The Regulations are therefore unlawful because they were enacted "without observance of procedure required by law." 5 U.S.C. § 706(2)(D).

The typical remedy for NEPA violations is to enjoin the unlawful federal action pending completion of a new EIS. In this case, that would mean enjoining enforcement of the Regulations published at Title 7 C.F.R. pt. 319.40. The Court, however, has considerable equitable discretion to determine the appropriate form of injunctive relief. Unless Congress has intervened to control judicial discretion, injunctive relief is "not a remedy which issues as of course." *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311-12, 72 L. Ed. 2d 91, 102 S. Ct. 1798 (1982). The courts should "not lightly assume that Congress has intended to depart from established principles" of equity. *Id.* at 313. NEPA does not limit the [*6] Court's equitable discretion, *Save the Yaak Comm. v. Block*, 840 F.2d 714, 722 (9th Cir. 1988), nor do any provisions of FPPA or PQA intimate a congressional intent to confine the exercise of equity jurisdiction.

"The essence of equity jurisdiction has been the power of the Chancellor to do equity and to mould each decree to the necessities of the particular case. Flexibility rather than rigidity has distinguished it." *Weinberger*, 456 U.S. at 312 (quoting *Hecht Co. v. Bowles*, 321 U.S. 321, 329, 88 L. Ed. 754, 64 S. Ct. 587 (1944)). "Although the district court has power to do so, it is not required to set aside every unlawful agency action. The court's decision to grant or deny injunctive or equitable relief under the [Administrative Procedure Act] is controlled by principles of equity." *National Wildlife Fed'n v. Espy*, 45 F.3d 1337, 1343 (9th Cir. 1995). When regulations have been promulgated improperly, the Court may, if equity demands, leave the regulations in place while the agency follows the necessary procedures. *Idaho Farm Bureau Fed'n v. Babbitt*, 58 F.3d 1392, 1405 (9th Cir. 1995).

To obtain an injunction, Plaintiffs must establish irreparable injury [*7] and the inadequacy of legal remedies. *Weinberger*, 456 U.S. at 312. The Court must balance the harms to the parties and the public in light of the substantive policies of the underlying statutes. *Amoco Production Co. v. Village of Gambell*, 480 U.S. 531, 544-45, 94 L. Ed. 2d 542, 107 S. Ct. 1396 (1987); *Weinberger*, 456 U.S. at 312. In other words, "the party seeking relief must show not merely a statutory violation, but a probability

of injury serious enough to outweigh any adverse effects from the issuance of an injunction." *Seattle Audubon Soc'y v. Evans*, 771 F. Supp. 1081, 1088 (W.D. Wash.), *aff'd*, 952 F.2d 297 (9th Cir. 1991).

B. Possible Forms of Injunctive Relief

1. Status Quo Ante

An injunction returning regulation of the importation of unfinished wood products to the status quo ante, i.e., reliance on visual inspection as the principal means of preventing the entry of infested wood into the United States, would clearly be inappropriate and is not requested by any of the parties. The Court is required to shape equitable relief in light of the substantive policies of the underlying statutes. *Gambell*, 480 U.S. at 544. One of the purposes [*8] of NEPA is "to promote efforts which will prevent or eliminate damage to the environment." 42 U.S.C. § 4321. FPPA and PQA, similarly, are intended to prevent the introduction and spread of exotic pests. The parties agree that the current regulations are an improvement over the status quo ante; they simply disagree about whether they are an adequate improvement. It would therefore be an abuse of discretion for the Court to issue an injunction which would result in less protection to the environment and less protection against the entry of exotic pests into the United States than exist under the current Regulations.

2. Allow Current Regulations to Remain in Effect Until Completion of New EIS

APHIS maintains that the only appropriate action for the Court is to permit the current Regulations to remain in force in their entirety pending completion of a new EIS. Relying on cases discussing the doctrine of severability, the agency argues that the Court does not have the authority to pick and choose which provisions of the current Regulations to enforce. See *North Carolina v. Federal Energy Regulatory Comm'n*, 235 U.S. App. D.C. 28, 730 F.2d 790 (D.C. Cir. 1984). Severability [*9] cases, however, are inapposite. Severability is an issue when a particular provision of a statute or regulation is invalid but the remainder is lawful. Here, the Regulations are unlawful in their entirety because the agency did not comply with the procedure required by law. The question before the Court, therefore, is not whether certain unlawful portions of the Regulations may be stricken in order to allow the remainder to continue in effect indefinitely. The question is what interim form of relief the Court should institute pending com-

pletion of a new EIS and promulgation of regulations in light of the new EIS.

As discussed above, the current Regulations are the baseline for appropriate injunctive relief. Additional injunctive relief may be appropriate, however, if Plaintiffs satisfy the requirements for equitable relief.

a. Injunction Against Additional Permits

ONRC argues that the most appropriate form of relief is an injunction preventing APHIS from issuing additional permits under the Regulations but allowing existing permits to continue in force. ONRC maintains that this injunction will reduce the risk of entry of exotic pests into the United States while minimizing [*10] interference with established economic expectations and existing contracts.

Based on the fact that the Court found that APHIS assumed when drafting the EIS that individually ineffective control measures would be effective collectively, ONRC maintains that the entry of exotic pests into the United States in wood imports continues to be a substantial threat. ONRC also points to APHIS' own studies which found that non-tropical wood products from Chile, New Zealand, and Siberia pose a high risk of harboring pests that could be damaging to American forests.

APHIS responds that ONRC's fear is too speculative to justify enjoining additional wood imports. APHIS is partially correct. ONRC requests that APHIS be enjoined from issuing any new permits under the existing regulations. Some categories of wood products governed by the Regulations, however, do not pose a significant threat of infestation to forests in the continental United States. Bamboo and tropical hardwoods, for example, pose little threat to temperate forests in the United States.

Pests from forests that are comparable to American forests pose a greater threat. A particular exotic pest may be well-adapted to the conditions [*11] that prevail in American forests, but may not be constrained by resistances to it that developed in its region of origin. Indeed, some of the most devastating North American infestations in the past were caused by pests that were innocuous in their regions of origin. *Denison Decl.* P 20. Two catastrophic infestations affecting North American hardwood trees originated with the importation of infected logs from Europe and Asia: chestnut blight and Dutch elm disease. 7 Administrative Record ("AR") 2163-64. APHIS' own studies demonstrate a high risk of infes-

tation from non-tropical trees grown in Chile, New Zealand, and Siberia. 8 AR 2636, 9 AR 2951, 9 AR 3191. In addition, the administrative record contains criticisms of APHIS' risk studies for focusing on known rather than unknown risks. 9 AR 2783, 10 AR 3438-40.

The record therefore indicates a significant threat of infestation from forests comparable to those in the United States, but does not indicate a significant threat from tropical hardwoods. APHIS does not deny that if exotic pests did establish themselves in American forests, the consequences could be devastating and difficult to mitigate.

When an injury to the environment [*12] is "sufficiently likely," the balance of harms will usually favor the issuance of an injunction to protect the environment. *Gambell*, 480 U.S. at 545. Although APHIS provided estimates of the economic impact associated with enjoining the issuance of new permits, it did not provide an estimate of the costs of an injunction targeted at imports from regions which pose the greatest threat to the health of American forests. Given that an injunction would remain in effect only until APHIS completes a new EIS and promulgates regulations that comply with NEPA, the short-term economic consequences of an injunction against the issuance of new permits for the import of non-tropical unfinished wood products are outweighed by the potential for irreparable harm to American forests by the importation of exotic pests.

ONRC has therefore demonstrated sufficient likelihood of environmental harm to justify an injunction against the issuance of new permits for the import of non-tropical unfinished wood products.

b. Rescission of Permits Already Issued

CATS argues that ONRC's proposed injunction is too limited because it allows those who already have permits to continue importing unfinished [*13] wood products despite the inadequacy of the current Regulations. Although CATS correctly points out that ONRC's proposed injunction does not address the threat posed by wood being imported under existing permits, CATS' injunction would entail significantly greater economic costs. In addition, courts have been more reluctant to interfere with existing permits than to enjoin the issuance of new ones. See *Forelaws on Board v. Johnson*, 743 F.2d 677, 686 (9th Cir. 1984), cert. denied, 478 U.S. 1004, 92 L. Ed. 2d 709, 106 S. Ct. 3293 (1986) (cited in *Gambell*, 480 U.S. at 541; *Forest Conservation Council v. United States Forest Serv.*, 66 F.3d 1489, 1496 (9th Cir.

1995)). Given the interference with existing economic interests and contracts that would necessarily result from rescinding permits and given the greater cost that would result from enjoining all imports, the Court finds that CATS has failed to establish that the balance of harms tips in favor of issuing its proposed injunction.

C. Compliance with GATT

APHIS contends that enjoining the issuance of new permits is contrary to the General Agreement on Tariffs and Trade ("GATT") See WTO-SPS arts. 2.2-2.3. Article [*14] 2.2 of the agreement on sanitary and phytosanitary measures provides that "Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence" When relevant scientific evidence is insufficient, "a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information Members shall seek to obtain the additional information necessary for a more objective assessment of risk . . . within a reasonable period of time." WTO-SPS art. 5.7. Phytosanitary measures may not arbitrarily or unjustifiably discriminate between member nations where similar conditions prevail and may not constitute disguised restrictions on international trade. WTO-SPS art. 2.3.

By enjoining only the issuance of new permits for imports that pose a threat of infestation to North American forests, the injunction is not broader than necessary to protect plant life. The injunction will last only until APHIS conducts a new EIS and promulgates regulations that comply with NEPA. By permitting [*15] imports to continue under existing permits, the impact on international trade is minimized. The injunction proposed by ONRC, as modified to allow the importation of wood products that do not pose a threat to the health of North American forests, is therefore consistent with the United States' obligations under GATT.

D. Geographic Scope

Intervenors contend that Plaintiffs do not have standing to request injunctive relief outside the Northern District of California or, in the alternative, California, Oregon, and Washington. District courts, however, may grant nationwide injunctive relief when necessary to provide the plaintiff complete relief. *Bresgal v. Brock*, 843 F.2d 1163, 1170-71 (9th Cir. 1987); see also *Califano v. Yamasaki*,

442 U.S. 682, 702, 61 L. Ed. 2d 176, 99 S. Ct. 2545 (1979) (in class action, "scope of injunctive relief is dictated by the extent of the violation established, not by the geographical extent of the plaintiff class"). In the previous Order, the Court held that Plaintiffs have standing to challenge the Regulations' compliance with NEPA. As Intervenor's own discussion of the introduction of the pitch canker into California demonstrates, pests in one [*16] region of the country can spread to other regions of the country. West Coast forests, therefore, face a threat of infestation regardless of the port of entry of the infested wood. Limiting the scope of injunctive relief to northern California or to the West Coast would therefore deny Plaintiffs complete relief. The Court thus has the authority to issue a nationwide injunction.

CONCLUSION

The Court finds that ONRC has established a substantial likelihood of irreparable harm resulting from the introduction of exotic pests into United States forests by means of imports of nontropical unfinished wood products. The balance of harms tips in favor of enjoining APHIS from issuing new permits for such products but allowing imports to continue under permits that have already been issued.

For the foregoing reasons, Plaintiff ONRC's mo-

tion for a preliminary injunction is GRANTED in part. Plaintiff CATS' motion for an injunction and declaratory relief is DENIED.

The Court therefore ENJOINS APHIS from issuing any; new permits for the importation of unfinished non-tropical wood products pursuant to Title 7 C.F.R. §§ 319.40-5(b) (Monterey pine logs and lumber from Chile and New Zealand, Douglas-fir [*17] logs and lumber from New Zealand), 319.40-5(d) (temperate hardwoods), 319.40-6(a) (universal importation, logs), and 319.40-6(b) (universal importation, lumber) until APHIS prepares a new Environmental - Impact Statement and promulgates regulations governing the importation of unmanufactured wood products. Except to the extent otherwise required by this Order, APHIS shall comply with the Regulations published at Title 7 C.F.R. pt. 319.40 until it has promulgated regulations that comply with NEPA.

The parties shall appear before the Court on Friday, May 15, 1998, to report the progress in issuing a new EIS.

IT IS SO ORDERED.

Dated: JUN - 5 1997

CLAUDIA WILKEN

United States District Judge

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Appendix C. Documents Related to Compliance

1. Enhanced Hazard Risk Assessment for Determining the Quarantine Status of Exotic Organisms	C-3
2. Compliance Agreement, PPQ Form 519	C-5
a. Attachment 1, Regulated Foreign Lumber Processing Facility - Dry Kiln Mill ..	C-7
b. Attachment 2, Foreign Logs Processing Facility - Sawmill	C-9
c. Attachment 3, Regulated Foreign Logs Processing Facility - Veneer Mill	C-11
d. Attachment 4, Foreign Logs and Lumber, Regulated Wood Waste Processing Facility - Paper Mill	C-15
e. Attachment 5, Foreign Logs and Lumber, Regulated Wood Waste Processing Facility - Particleboard Mill	C-17
f. Attachment 6, Foreign Logs and Lumber, Regulated Wood Waste Processing Facility - Power Plant	C-19
3. Compliance Service Agreement Example	C-21

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ENHANCED HAZARD RISK ASSESSMENT FOR DETERMINING THE QUARANTINE STATUS OF EXOTIC ORGANISMS

This enhanced hazard risk assessment process is a tool used by APHIS-PPQ-BATS to quickly determine and document the quarantine status of exotic organisms, especially for taxa sent as "Urgent" Interceptions. Taxa not formerly evaluated or in need of re-evaluation are assessed using the criteria listed below. The taxon is determined as reportable or nonreportable using the attached risk table, and the taxon name is subsequently added to the appropriate pest or tally quarantine status list (dictionary). A record of the evaluation, including citations of references used, is maintained in an electronic file.

Criterion 1: Taxonomy

- (H) Complete species or subspecies identification.
- (M) Generic or higher level Identification only and assessor feels comfortable extrapolating Information from similar organisms.
- (L) Generic or higher level Identification only and assessor not comfortable extrapolating information from similar organisms.

Criterion 2: Hazard Identification/Distribution of Taxon.

- (H) Non-indigenous and not present, but capable of establishment in the U.S.;
or
Non-indigenous with limited range in the U.S. and under official control (or will soon be evaluated by APHIS);
or
Non-indigenous, present in the U.S., and reached probable limits of range, but genetically different enough to warrant concern and/or vector a foreign plant pest.
- (M) Native, but genetically different enough to warrant concern or to vector an exotic plant pest (that the original taxon could not), and is capable of further expansion or increased damage potential.
- (L) Non-indigenous or native in U.S. and reached probable limits of range and not genetically different enough to warrant concern and/or vector a foreign plant pest,
or
Has NOT reached probable limits of range, but no official control exists or is likely to be initiated.
- (U) Unknown, not enough Information available to make a choice.

Criterion 3: Agricultural Concern – Known Importance.

- (H) Known pest or capable of vectoring known pests of agriculture (crops, forests, animals, beneficial organisms, environment, etc.).
- (M) Not known as a pest of agriculture, but having characteristics that demonstrate a potential for becoming a pest in the U.S.
- (L) Not known as a pest of agriculture & not likely to become a pest if established in the U.S.
- (U) Unknown, not enough information available to make a choice.

ENHANCED HAZARD RISK ASSESSMENT QUARANTINE STATUS DECISION TABLE		
RISK RATING	RISK CATEGORY	QUARANTINE DECISION
HIGH RISK TO MEDIUM RISK	HHH HHM HMH HMM HMu HUM MHH MHM MUM LHM LUM	Quarantine Action Required
LOW RISK	HHL HHU HLH HLM HLU HUL HUU MHL MHU MLM MLL MLU MUL MUU LHL LHU LLH LLM LLL LLU LLU LUU	No Action Required
NOT APPLICABLE* (RE-ASSESS)	HML HUH MMH MMM MMH MML MMU MLH MUH LHH LMH LMM LML LMU LUH	invalid risk category combinations

* NOTE: Some ranking combinations are invalid or very unlikely. For example, for taxa above the species level (M or L ranks, Criterion 1), it is not likely that an assessor would know the taxon's genetic map (M rank, Criterion 2) or have knowledge that the taxon represents a "known pest" (H rank, Criterion 3).

□ FOR URGENT INTERCEPTIONS:

Use the Table to determine quarantine action on imported shipments infested with the rated organism.

□ TO ADD THE ORGANISM TO EITHER THE PEST OR TALLY LIST:

First re-assess all organisms with assigned risk categories:

"L-". The assessor should become comfortable with extrapolating information from similar organisms, before assigning a quarantine status to the taxon.

"-U-", "-U", or "-UU". Taxa will not be listed until their presence or absence in the U.S. is known and their potential impact on U.S. agriculture is estimated.

rated as "not applicable" by the enhanced hazard process (see note, above).

Add to the Pest List all organisms ranked high-to-medium risk, or to the Tally List all organisms ranked low risk by the enhanced hazard process.

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE

COMPLIANCE AGREEMENT

1. NAME AND MAILING ADDRESS OF PERSON OR FIRM	2. LOCATION
---	-------------

3. REGULATED ARTICLE(S)

4. APPLICABLE FEDERAL QUARANTINE(S) OR REGULATIONS

6. I/We agree to the following:

[Note: See attachments 1-6, any of which could be referred to here.]

7. SIGNATURE	8. TITLE	9. DATE SIGNED
--------------	----------	----------------

The affixing of the signatures below will validate this agreement which shall remain in effect until cancelled, but may be revised as necessary or revoked for noncompliance.

10. AGREEMENT NO.

11. DATE OF AGREEMENT

12. PPQ OFFICIAL (Name and Title)

13. ADDRESS

14. SIGNATURE

15. STATE AGENCY OFFICIAL (Name and Title)

16. ADDRESS

17. SIGNATURE

PPQ FORM 519
4-10-77

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Compliance Agreement - Attachment #1
Regulated Foreign Lumber Processing Facility - Dry Kiln Mill

1. The imported lumber will be kept segregated from other wood products from the time of discharge and release at the port of entry until the lumber is completely processed under the terms of the import permit and this compliance agreement.
2. The imported lumber will move to this facility in as direct a route as reasonably possible with no diversions. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
3. The facility will be responsible for notifying the USDA, APHIS Work Unit office (specified below) of the arrival of shipments at the processing facility.
4. This facility may receive raw lumber imported from all sources identified in 7 CFR 319.40 and specified on the importer's permit.
5. Any pallets, dunnage or other solid wood packing material used in the shipment of the regulated wood must be processed as regulated wood under the terms of this agreement.
6. The raw lumber must be heat treated in accordance with the 319.40-7c or heat treated with moisture reduction in accordance with 319.40-7-d within thirty (30) days from the time the lumber is released from the port of first arrival into the United States. Heat treatment must be completed before any cutting, planing, or sawing of the raw lumber.
 - (a) Kiln drying, conducted in accordance with the schedule prescribed for the regulated article in the Dry Kiln Operator's Manual, Agriculture Handbook 188.
 - (b) Dry heat, exposure that raises the temperature of the center of each regulated article to at least 71.1 °C (160 °F), and maintains the article at that temperature for at least 75 minutes and reduces the moisture content of the article to 20 percent or less.
7. A record or log book will be kept by this facility listing imported wood type (genus and species), quantity, origin (country), importer of record or facility received from, and treatment completion data. The record will be made available to APHIS officers or APHIS cooperators upon request.
8. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.

9. The APHIS Work Unit office in _____ shall be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or compromise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions, etc. The APHIS contact telephone number is _____, fax is _____. Office hours are _____ to _____, Monday through Friday.
10. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____.
11. This agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that this facility, its' employees, or agents have failed to comply with its conditions. If the cancellation is oral, the decision to cancel this agreement and the reason(s) for canceling shall be confirmed in writing as promptly as circumstances permit. Any cancellation may be appealed in writing to the Administrator within ten days after receiving written notification of the cancellation. The appeal shall state all the facts and reasons upon which the company replies to show that the compliance agreement was wrongfully canceled. The administrator shall grant or deny the appeal as promptly as circumstances permit. If there is a conflict as to any material fact, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

As _____ of the _____
(Title) (Name of company)

facility, I have read and understood the conditions of this compliance agreement.

Signature Date

Title

Compliance Agreement - Attachment #2
Foreign Logs Processing Facility - Sawmill

1. The imported logs and products derived from those logs will be kept segregated from other wood products from the time of discharge and release at port of entry until the regulated wood products are completely processed under the terms of the import permit and this compliance agreement.
2. The logs will be moved from the port of first arrival to the sawmill in as direct a route as reasonably possible with no diversions. Log trucks or containers may be used to transport the logs from the port of arrival to the mill. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
3. The facility will be responsible for notifying the USDA, APHIS Work Unit office (specified below) of the arrival of shipments at the processing facility.
4. At the destination mill, the logs will be unloaded and put directly into decks designated for the imported logs and apart from other logs. If brow logs are used, those logs must also be processed under the terms of this agreement.
5. Any pallets, dunnage or other solid wood packing material used in the shipment of the regulated wood must be processed as regulated wood under the terms of this agreement.
6. A record or log book will be kept by this facility listing imported wood type (genus and species), quantity, origin (country), importer of record, and treatment completion data. The record will be made available to APHIS officers or APHIS cooperators upon request.
7. Logs will be processed into lumber at the sawmill in accordance with the following procedures.
 - a. Regulated logs will be processed separately from other logs, unless all logs processed at that time are processed under the terms of this agreement.
 - b. Green lumber produced will be kiln dried at this facility or may be transported to another facility which is under compliance with USDA, APHIS to process regulated green lumber. The kiln drying process must raise the temperature of each article to at least 71.1 °C (160 °F) at its center and maintain that temperature for at least 75 minutes, reducing the moisture content of the treated article to 20 percent or less.
 - c. The mill will be cleaned of all regulated chips, sawdust and wood waste before processing other non-regulated logs.

8. All chips and sawdust produced from the bucking and trimming operations will be collected and handled as regulated wood waste.
9. Regulated wood waste must be collected for burning as fuel at the mill site, or collected into a closed container for transport to another facility which is under compliance with USDA, APHIS, to process regulated wood waste into paper, particle board or energy.
10. Transport of regulated wood waste shall be in closed trucks and trailers with tightly tarped tops and no open screen vents, by as direct a route as reasonably possible. Receiving facilities must be declared and approved by the monitoring official before shipments are allowed to proceed to that facility.
11. The regulated logs and products generated from those logs (such as veneer, lumber, chips, sawdust, or other products) must be processed in accordance with this agreement within 60 days of the time the logs are released from the port of first arrival.
12. Only regulated articles covered by this agreement will be processed at any one time unless all articles processed are treated in accordance with the provisions of this agreement. Sanitary practices adequate to assure treatment of all or practically all of the products derived from the logs shall be used at regular intervals during the processing and at completion of all processing of each shipment under this agreement. Truck beds, containers, loaders, tarpaulins and other components of the transportation and loading system shall be thoroughly sept out before subsequent contact with non-regulated articles. Sweepings will be treated as a regulated wood waste.
13. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.
14. The APHIS Work Unit office in _____, _____ be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or comprise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions and etc. The APHIS contact telephone number is _____, fax is _____.
15. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____, _____ to _____, Monday through Friday.

Compliance Agreement - Attachment #3
Regulated Foreign Logs Processing Facility - Veneer Mill

1. The imported logs, veneer blocks, cants and the products derived from them will be kept separate from all other wood products from the time of discharge from the means of conveyance until the regulated wood products are completely processed under the terms of the import permit and this compliance agreement.
2. The regulated logs, veneer blocks and/or cants will be transported to the mill in as direct a route as reasonably possible with no diversions. Log trucks or containers may be used to transport the logs from the port of arrival to the mill. Regulated veneer blocks must be transported in a completely enclosed container or on a tightly tarped truck. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
3. The facility will be responsible for notifying the USDA, APHIS Work Unit office (specified below) of the arrival of shipments at the precessing facility.
4. At the destination mill, the logs, veneer blocks or cants will be unloaded and put directly into decks designated for the imported wood and apart from other logs. If brow logs are used, those logs must also be processed under the terms of this agreement.
5. Regulated logs, veneer blocks and cants will be processed in accordance with the following procedures.
 - a. The regulated logs, veneer blocks and cants will be processed separately from all other wood products unless all wood products are processed under the terms of this agreement.
 - b. All regulated logs, veneer blocks and cants may be trimmed to size before steaming.
 - c. Veneer blocks and cants will be heat treated in the steam vaults for 24 hours at 165-180 °F, or other appropriate schedule as is customary before slicing.
 - d. Green veneer must be treated with dry heat in the veneer drier with exposure to temperatures of at least _____ °C (_____ °F) for at least _____ minutes which will result in a moisture content of 20 percent or less. This is considered to meet or exceed the requirements for heat treatment with moisture reduction as stipulated in 7 CFR 319.40.
 - e. Regulated wood waste, including lily pads, veneer block cores and substandard veneer sheets may be processed into wood chips and sawdust or may be kiln dried utilizing a process which must raise the temperature of each article to at least 71.1 °C (160 °F) at its center and maintain that temperature for at least 75 minutes, reducing the moisture content

of the treated article to 20 percent or less. The chips and sawdust generated during the processing of the regulated articles may be utilized immediately for fuel onsite, or alternatively, may be collected for transportation to an approved processing facility under compliance with USDA, APHIS.

- f. Transport of regulated wood waste shall be in closed trucks and trailers with tightly tarped tops and no open screen vents, by as direct a route as possible. Receiving facilities must be declared and approved by the monitoring official before shipments are allowed to proceed to that facility.
 - g. The mill will be cleaned of all regulated chips, sawdust and wood waste before processing other non-regulated logs or blocks.
6. The regulated logs and products generated from those logs (such as veneer, lumber, chips, sawdust, or other products) must be processed in accordance with this agreement within 60 days of the time the logs are released from the port of first arrival.
7. Only regulated articles covered by this agreement will be processed at any one time unless all articles processed are treated in accordance with the provisions of this agreement. Sanitary practices adequate to assure treatment of all or practically all of the products derived from the logs shall be used at regular intervals during the processing and at completion of all processing of each shipment under this agreement. Truck beds, containers, loaders, tarpaulins and other components of the transportation and loading system shall be thoroughly sept out before subsequent contact with non-regulated articles. Sweepings will be treated as a regulated wood waste.
8. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.
9. The APHIS Work Unit office in _____, _____ be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or comprise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions and etc. The APHIS contact telephone number is _____, fax is _____.
10. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____, _____.
11. This agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that this facility, its' employees, or agents have failed to comply with its conditions. If the cancellation is oral, the decision to cancel this agreement and the reason(s) for canceling shall be confirmed in writing as promptly as circumstances permit. Any cancellation may be appealed in writing to the Administrator within ten days after receiving written notification of the cancellation. The appeal shall state all the facts and

reasons upon which the company replies to show that the compliance agreement was wrongfully canceled. The administrator shall grant or deny the appeal as promptly as circumstances permit. If there is a conflict as to any material fact, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

As _____ of the _____
(Title) (Name of company)

facility, I have read and understood the conditions of this compliance agreement.

Signature Date

Title

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Compliance Agreement - Attachment #4
Foreign Logs and Lumber
Regulated Wood Waste Processing Facility - Paper Mill

1. Regulated sawdust, shavings and chips may be delivered to this mill from any source mill under compliance to process the regulated logs and wood products.
2. This facility will be responsible for notifying the USDA, APHIS Work Unit office (specified below) of the arrival of shipments at the processing facility.
3. The regulated wood waste must be moved from the source mill to this facility in as direct route as reasonably possible with no diversions. The wood waste (defined here as regulated sawdust, wood chips and/or shavings) must be received in closed trucks and trailers with tightly tarped tops and no open screen vents. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
4. Upon delivery, the regulated material must be placed in a storage area which is separate from other nonregulated material unless all material processed from that storage area is handled in accordance with the provisions of this agreement. Alternatively, the regulated material must be placed at the front of the wood waste storage area to go directly into the digester.
5. The delivering trucks and trailers will be swept free of all wood waste to include the exterior surfaces of the vehicle such as bumpers and tailgates. Any wood waste obtained from this or any other cleaning process that is not of a quality to be utilized for pulp production may be utilized for fuel production onsite, with the provision that the material should be placed at the front of the fuel storage area for immediate consumption.
6. All regulated wood waste must be processed into pulp or consumed as fuel within 60 days of the time that the regulated wood product was released at the port of entry. All other wood products "contaminated" by these deliveries will also be processed in the same time period.
7. The pulp manufacturing processed is considered to meet or exceed the requirements for heat treatment as stipulated in 7 CFR 319.40-7c.
8. A record or log book will be kept by this facility listing imported wood type (genus and species), quantity, origin (country), importer of record, and treatment completion data. The record will be made available to APHIS officers or APHIS cooperators upon request.
9. Only regulated articles covered by this agreement will be processed at any one time unless all articles processed are treated in accordance with the provisions of this agreement. Sanitary practices adequate to assure treatment of all or practically all of the products derived from the logs shall be used at regular intervals during the processing and at completion of all processing of each shipment under this agreement. Truck beds, containers, loaders, tarpaulins and other

components of the transportation and loading system shall be thoroughly sept out before subsequent contact with non-regulated articles. Sweepings will be treated as a regulated wood waste.

10. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.
11. The APHIS Work Unit office in _____, _____ be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or comprise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions and etc. The APHIS contact telephone number is _____, fax is _____.
12. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____, _____.
13. This agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that this facility, its' employees, or agents have failed to comply with its conditions. If the cancellation is oral, the decision to cancel this agreement and the reason(s) for canceling shall be confirmed in writing as promptly as circumstances permit. Any cancellation may be appealed in writing to the Administrator within ten days after receiving written notification of the cancellation. The appeal shall state all the facts and reasons upon which the company replies to show that the compliance agreement was wrongfully canceled. The administrator shall grant or deny the appeal as promptly as circumstances permit. If there is a conflict as to any material fact, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

As _____ of the _____
(Title) (Name of company)

facility, I have read and understood the conditions of this compliance agreement.

Signature

Date

Title

Compliance Agreement - Attachment #5
Foreign Logs and Lumber
Regulated Wood Waste Processing Facility - Particleboard Mill

1. Regulated sawdust, shavings and chips may be delivered to this mill from any source mill under compliance to process the regulated logs and wood products.
2. This facility will be responsible for notifying the USDA, APHIS, Work Unit office (specified below) of the arrival of shipments at the processing facility.
3. The required wood waste must be moved from the source mill to this facility in as direct a route as reasonably possible with no diversions. The wood waste (defined here as regulated sawdust, wood chips and/or shavings) must be received in closed trucks and trailers with tightly tarped tops and no open screen vents. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
4. Upon delivery, the regulated material must be placed in a storage area which is separate from other non-regulated material unless all material processed from that storage area is handled in accordance with the provisions of this agreement. Alternatively, the regulated material must be placed at the front of the wood waste storage area to go directly into the processor.
5. The delivering trucks and trailers will be swept free of all wood waste to include the exterior surfaces of the vehicle such as bumpers and tailgates. Any wood waste obtained from this or any other cleaning process that is not of a quality to be utilized for particleboard production may be utilized for fuel production onsite, with the provision that the material should be placed at the front of the fuel storage area for immediate consumption.
6. All regulated wood waste must be processed into particleboard or consumed as fuel within 60 days of the time that the regulated wood product was released at the port of entry. All other wood products "contaminated" by these deliveries will also be processed in the same time period.
7. The particleboard manufacturing process is considered to meet or exceed the requirements for heat treatment as stipulated in 7 CFR 319-40-7c.
8. A record or log book will be kept by this facility listing imported wood type (genus and species), quantity, origin (country), importer of record, and treatment completion data. The record will be made available to APHIS officers or APHIS cooperators upon request.
9. Only regulated articles covered by this agreement will be processed at any one time unless all articles processed are treated in accordance with the provisions of this agreement. Sanitary practices adequate to assure treatment of all or practically all of the products derived from the logs shall be used at regular intervals during the processing and at completion of all processing

of each shipment under this agreement. Truck beds, containers, loaders, tarpaulins and other components of the transportation and loading system shall be thoroughly sept out before subsequent contact with non-regulated articles. Sweepings will be treated as a regulated wood waste.

10. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.
11. The APHIS Work Unit office in _____, _____ be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or comprise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions and etc. The APHIS contact telephone number is _____, fax is _____.
12. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____, _____.
13. This agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that this facility, its' employees, or agents have failed to comply with its conditions. If the cancellation is oral, the decision to cancel this agreement and the reason(s) for canceling shall be confirmed in writing as promptly as circumstances permit. Any cancellation may be appealed in writing to the Administrator within ten days after receiving written notification of the cancellation. The appeal shall state all the facts and reasons upon which the company replies to show that the compliance agreement was wrongfully canceled. The administrator shall grant or deny the appeal as promptly as circumstances permit. If there is a conflict as to any material fact, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

As _____ of the _____
(Title) (Name of company)

facility, I have read and understood the conditions of this compliance agreement.

Signature Date Title

Compliance Agreement - Attachment #6
Foreign Logs and Lumber
Regulated Wood Waste Processing Facility - Power Plant

1. Regulated sawdust, shavings and chips may be delivered to this mill from any source mill under compliance to process the regulated logs and wood products.
2. This facility will be responsible for notifying the USDA, APHIS Work Unit (specified below) of the arrival of shipments at the processing facility.
3. The regulated wood waste must be moved from the source mill to this facility in as direct a route as reasonably possible with no diversions. The wood waste (defined here as regulated sawdust, wood chips and/or shavings) must be received in closed trucks and trailers with tightly tarped tops and no open screen vents. If rail transportation is used, then a letter of express shipment must be requested from the rail carrier to prevent delay in transit.
4. Upon delivery the material must be placed at the front of the chip storage area going into the furnace.
5. The delivering trucks and trailers will be swept free of all wood waste to include the exterior surfaces of the vehicle such as bumpers and tailgates. Any wood waste obtained from this or any other cleaning process will be consumed as fuel under the conditions of this agreement.
6. All regulated wood waste must be consumed as fuel within 60 days of the time that the regulated wood product was released at the port of entry. All other wood products "contaminated" by these deliveries will also be burned in the same time period.
7. The furnace will burn all the regulated wood waste to ash.
8. A record or log book will be kept by this facility listing imported wood type (genus and species), quantity, origin (country), importer of record or facility received from, and treatment completion data. The record will be made available to APHIS officers or APHIS cooperators upon request.
9. APHIS inspectors and/or APHIS cooperators will be permitted access to the premises described to monitor compliance with this agreement.
10. The APHIS Work Unit office in _____, _____ be notified as soon as possible (but not later than 24 hours) when conditions exist that violate or comprise the conditions of this agreement. These conditions could include, but are not limited to, spills, accidents, equipment malfunctions and etc. The APHIS contact telephone number is _____, fax is _____.

11. Requests for changes or revisions to this agreement must be made in writing and submitted to the APHIS office in _____, _____.
12. This agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that this facility, its employees, or agents have failed to comply with its conditions. If the cancellation is oral, the decision to cancel this agreement and the reason(s) for canceling shall be confirmed in writing as promptly as circumstances permit. Any cancellation may be appealed in writing to the Administrator within ten days after receiving written notification of the cancellation. The appeal shall state all the facts and reasons upon which the company replies to show that the compliance agreement was wrongfully canceled. The administrator shall grant or deny the appeal as promptly as circumstances permit. If there is a conflict as to any material fact, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

As _____ of the _____
(Title) (Name of company)

facility, I have read and understood the conditions of this compliance agreement.

Signature Date

Title

Agreement No.
Accounting No.

COOPERATIVE SERVICE AGREEMENT

Between

XXXXXXXXXXXXXXXXXX

And

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)
ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)

Article 1 - Purpose

THIS AGREEMENT is made and entered into by and between
XXXXXXXXXXXXXXXXXX., hereafter referred to as the Cooperator, and the
United States Department of Agriculture, Animal and Plant Health
Inspection Service, hereafter referred to as APHIS.

APHIS requires that certain agricultural produce imported from
XXXXXX, be inspected and/or treated by an APHIS Officer to insure
the risk of introducing pests into the United States (US) is
eliminated; and

The purpose of this agreement is to provide training for XXXXX
Officers in order for them to initiate certain treatments of
fruit offered for import at embarkation points outside the US as
requested by the Cooperator. This inspection and/or treatment of
the produce outside the US will aid in keeping undesirable pests
and diseases from entering the US, thus giving added protection
to the agricultural areas of the US; and

It is the intention of the parties hereto that such cooperation
shall be for their mutual benefit and the benefit of the people
of the US and XXXXXX.

NOW, THEREFORE, for and in consideration of the promises and
mutual covenants herein contained the parties hereto do mutually
agree with each other as follows:

Article 2 - Authority

APHIS is authorized by 7 USC 147a(b), as amended, to cooperate with the governments of foreign countries and with foreign or international organizations or associations to detect, eradicate, suppress, control, and prevent or retard the spread of plant pests.

Furthermore, the Food, Agriculture, Conservation, and Trade Act of 1990, Pub. L. No. 101-624, Section (c) 2509, 1045 Stat. 4069-4073(1990), authorized APHIS to "collect fees to reimburse APHIS for the cost of carrying out the provision of the Federal Animal Quarantine Laws that relate to the importation, and exportation of animals, article, or means of conveyance."

Article 3 - Mutual Responsibilities

The Cooperator and APHIS mutually agree that:

Commodity-Specific workplans will be elaborated by APHIS and the Cooperator or its representative and updated annually, in order to delineate technical parameters and to quantify the workload.

Article 4 - The Cooperator's Responsibilities

The Cooperator agrees to/that:

- a. Designate in writing, to APHIS, an authorized representative who shall be responsible for administering the activities conducted under this Agreement.
- b. Deposit, upon execution of this Agreement, a certified or cashier's check for \$X,XXXXXX with the US Treasury, through USDA, to be expended in accordance with USDA regulations ,to cover salaries (including overtime), benefits, travel, subsistence, and other incidental expenses for APHIS Officers needed to perform the work herein described and administrative expenses. Whenever

the initial deposit is not sufficient to meet either the workload costs under this Agreement or its continuation, a further sum determined by APHIS shall be deposited, prior to completion of the work. All subsequent quarterly deposits shall be made by certified or cashier's check 30 days before the beginning of the quarter.

c. Obtain from the Government of XXXXXX any necessary permits or licenses required for the APHIS Officers to have free access to locations necessary for performance of the planned work.

d. Furnish facilities in XXXXXX for APHIS Officers and furnish personnel to be trained by APHIS Officers to inspect and/or treat produce offered for import into the US.

e. If any pests of economic significance to the US are found, the infested shipments will not be certified for shipment to US markets.

Article 5 - APHIS Responsibilities

APHIS agrees to:

a. Designate in writing, to the Cooperator, its authorized representative who shall be responsible for administering the activities conducted under this Agreement.

b. Furnish as requested by the Cooperator necessary training inspection personnel to: 1) provide training as necessary, 2) review and certify their inspection and treatment facilities, 3) provide supervision of the treatments, and 4) inspect and release the produce for shipment to the US when it meets plant quarantine requirements. The APHIS Officer/Officers will be furnished at the time or times agreed upon by the parties insofar as availabilities of personnel will permit.

c. Make an accounting of the monies deposited by the Cooperator quarterly with a final accounting upon termination or expiration

of the Agreement. Any balance remaining unobligated at the conclusion of any fiscal year may be utilized during the ensuing fiscal year if a continuation of the inspection services is required. Any unobligated balance upon termination or expiration of this Agreement shall be returned to the Cooperator.

Article 6 - Contingency Statement

This Agreement is contingent upon the Cooperator depositing, with APHIS, funds needed to conduct covered activities and upon the availability of APHIS personnel to conduct services.

Article 7 - Agreements with Other Entities

That nothing in the Agreement shall prevent any other country, organization, or individuals from entering into separate Cooperative service Agreements with APHIS for the purpose of inspecting, certifying, and releasing produce for shipment into the US.

Article 8 - Congressional Restriction

Under 41 USC 22, no member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this agreement or any benefit that may arise there from, unless it be made with corporation for its general benefit.

Article 9 - Agreement Maintenance

This Agreement Shall become effective upon date of final signature and shall continue indefinitely. This Agreement may be amended at any time by mutual agreement of the parties in writing and may be terminated by either party upon 60 days written notice to the other party and provided further, that in the event the Cooperator does not for any reason deposit necessary funds, APHIS is relieved of the obligation to continue any operation under this Cooperative Service Agreement. This Agreement shall not create any binding obligations under international law.

FOR THE UNITED STATES DEPARTMENT
ANIMAL AND PLANT HEALTH
INSPECTION SERVICE

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
XXXXXXX

Administrator

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX

Date

Date

Appendix D. Acronyms

APHIS	Animal and Plant Health Inspection Service (an agency within the U.S. Department of Agriculture)
AQI	Agricultural Quarantine Inspection
ARS	Agricultural Research Service
CAA	Clean Air Act
CATS	Californians for Alternatives to Toxics
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CSA	Compliance Service Agreement
DEIS	Draft Environmental Impact Statement
DOT	United States Department of Transportation
DSEIS	Draft Supplement to the Environmental Impact Statement; Draft Supplemental Environmental Impact Statement
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
FAS	Foreign Agricultural Service
FDA	United States Food and Drug Administration
FIS	Federal Inspection Service (agencies)
FPM	Forest Pest Management
FR	Federal Register

FS	U.S. Forest Service
FSEIS	Final Supplement to the Environmental Impact Statement; Final Supplemental Environmental Impact Statement
GAO	United States General Accounting Office
GATT	General Agreement on Tariffs and Trade
IES	Investigative and Enforcement Services, APHIS
INS	Immigration and Naturalization Service
M&B	Management and Budget, APHIS
NAFTA	North American Free Trade Agreement
NAPPO	North American Plant Protection Organization
NEPA	National Environmental Policy Act of 1969, as amended
NRC	Nuclear Regulatory Commission
ONRC	Oregon Natural Resources Council
PPQ	Plant Protection and Quarantine, APHIS
Q-40	Quarantine 40 Regulations (under 7 CFR Part 319)
ROD	Record of Decision
SBA	Small Business Administration
SEIS	Supplement to the Environmental Impact Statement; Supplemental Environmental Impact Statement
USDA	United States Department of Agriculture
USFS	United States Department of Agriculture, Forest Service
U.S.C.	United States Code
USDA	United States Department of Agriculture

WADS	Workload Accomplishment Data System
WTO	World Trade Organization

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Appendix E. Glossary

The definitions of the terms in this glossary are provided specifically to define them as they apply to their use in this document.

Adelgids	A genus of aphids that feeds chiefly on spruce and balsam and causes damage and unsightly galls.
Agricultural Quarantine Inspection Results Monitoring Program	Measures the effectiveness of inspections nationwide and provides information on which ports of entry pose the highest risk of having harmful pests and diseases enter the country.
Anti-feedant	Any substance applied to a surface that either hinders or prevents a pest from feeding.
Biodiversity	The relative abundance and frequency of biological organisms within ecosystems.
Biogeochemical cycles	Earth chemical cycles, such as sulfur or nitrogen cycles, that are controlled by living organisms.
Civil penalty	A cash fine imposed for noncriminal violations.
Compliance Agreement (PPQ Form 519)	A written agreement between APHIS and a person engaged in processing, handling, or moving regulated articles, in which the person agrees to comply with requirements contained in the agreement.
Conifers (coniferous)	A large order of trees and shrubs that are evergreen and all have cones.
Cooperative Service Agreement	A written agreement between APHIS, and a company or person not located in the United States. This foreign entity is referred to as the cooperator. This agreement defines the commodity-specific work plans and the responsibilities of the cooperator and APHIS. The purpose of this agreement is to provide training for inspectors and commodity inspection outside the United States to aid in keeping undesirable pests and diseases from entering the United States.
Debarking	A process, usually mechanical, of removing the bark from logs and other regulated wood articles. Removal of bark facilitates detection of

plant pests and pathogens or indications of plant pests (such as bore holes).

Defoliator	A pest that, in its various life stages, feeds voraciously on leaves of trees or other plant life, thus, consuming and stripping the tree or plant of its foliage.
Dermal	Of or relating to the skin or an organism's body surface.
<i>Diplodia</i> shoot blight	A large genus of fungi (family Sphaeropsidaceae, order Sphaeropsidales) that causes new plant stems and leaves to wither and die.
Dunnage	Loose materials used to support and protect cargo in a ship's hold or used as padding in a shipping container, or used for packing. These materials can include scrap lumber, newly manufactured wood packing boxes and cases, containers for fruit or vegetable commodities, and crates and pallets made from rough lumber. Dunnage, imported as cargo, can be manufactured from rough untreated lumber that has not been stripped of all tree bark.
Efficacy	Effectiveness or the power to produce the desired result.
Emergency Action Notification (PPQ Form 523)	A form used by U.S. port of entry inspectors to notify exporting countries, importers, and consignees and document the interception of commodities that contain plant pests regulated under the Federal Plant Pest Act, the Plant Quarantine Act, and the Federal Noxious Weed Act of 1974.
Entomologist	A scientist specializing in the study of insects.
Eradication	The complete elimination of a pest species; for some agricultural pests, this may mean the reduction of the pest populations to nondetectable levels.
Exotic pests	Pests that are outside their native range.
Exotic pest incursion management	APHIS' response to exotic pest introduction; usually a control strategy of eradication, suppression, or no action.
Flat bugs	An insect of the family Aradidae, usually living under bark and including a South American species capable of inflicting severe bites.

Foreign source intervention	Exclusion of foreign pests and diseases by eliminating the pathway at the country of origin.
Fumigation	The process of using a chemical's gaseous phase to kill plant pests. Used in an approved facility (enclosure or building) under strict supervision and guidelines.
Fungi	A major group of nonmobile, filamentous organisms that lack chlorophyll (i.e., are not photosynthetic) and get their nutrition from dead or living organisms. Examples of fungi are molds, mildews, yeasts, mushrooms, and puffballs.
GATT	General Agreement on Tariffs and Trade; a trade agreement that was implemented in 1995 and that applies to more than 100 countries.
Gray (Gy)	Unit of absorbed dose where 1 Gy is equivalent to the absorption of 1 joule per kilogram. (1 Gy = 1 J/kg)
Heat treatment	A process of using heat or heat with moisture reduction to raise and maintain the internal temperature of the wood to 71.1 °C for a minimum of 75 minutes or adherence to the procedures outlined in the Dry Kiln Operator's Manual.
Indigenous	Native; originating or developing or produced naturally in a particular land, region, or environment.
Integrated pest management	The selection, integration, and implementation of pest control actions on the basis of predicted economic, ecological, and sociological consequences; the process of integrating and applying practical methods of prevention and control to keep pest situations from reaching damaging levels while minimizing potentially harmful effects of pest control measures on humans, nontarget species, and the environment.
Kaloterme	The type genus of Kalotermitidae comprising many termites that are destructive pests of living trees or of dry timber.
Kilogray (kGy)	Measure of absorbed dose of radioactivity (1 kGy = 1,000 Gy).
<i>Leptographium</i>	A genus of fungi (class Hyphomycetes) that are root pathogens of conifers.
Log	The bole of a tree; trimmed timber that has not been sawn further than to form cants.

Lumber	Logs that have been sawn into boards, planks, or structural members such as beams.
Mitigation	Measures taken to avoid or reduce adverse impacts on the environment; or measures taken to avoid or reduce the likelihood of pest survival in a commodity.
NAFTA	North American Free Trade Agreement; a trade agreement among the United States, Mexico, and Canada, which was implemented in 1994.
Nematodes	Any of a class or phylum (Nematoda) of elongated cylindrical worms parasitic in animals or plants or free living in soil or water.
Pathogens	Microorganisms that can cause disease in humans, animals, and/or plants. They may be bacteria, viruses, fungi, or parasites.
Pest risk assessment	The qualitative and quantitative evaluation performed in an effort to define the risk of a pest species entering and becoming established in the country.
Phytosanitary	A term meaning that an object(s) is free of any plant-infecting or plant disease-causing agent.
Plant pest	Any living stage of any insects, mites, nematodes, slugs, snails, protozoa, or other invertebrate animals, bacteria, fungi, other parasitic plants or reproductive parts of parasitic plants, noxious weeds, viruses, or any organism similar to or allied with any of the foregoing, or any infectious substances, which can injure or cause disease or damage in any plants, parts of plants, or products of plants.
<i>Platypus</i> spp.	The type genus (family Platypodidae) comprising pinhole borers that usually attack freshly cut or seasoned wood.
Port of entry	The area (such as a seaport, airport, or land border station) where a person or cargo arrives in the United States and is inspected prior to entry into the country.
Primary processing	Any of the following processes: cleaning (removal of soil, limbs, and foliage), debarking, rough sawing (bucking or squaring), rough shaping, spraying with fungicide or insecticide sprays, and fumigation.
Probit 9 (Mortality)	A statistical estimation of 99.99683 percent mortality in a population of live organisms, corresponding to a survival rate of 32 individuals per million.

Rad (rad or Radiation Absorbed Dose)	Special unit for absorbed dose that is being superseded by the Gray (Gy). (1 rad = 0.01 J/kg = 0.01 Gy)
Regulated article	An article subject to APHIS (or agency) regulations; in this SEIS, the regulated articles are logs, lumber, and other unmanufactured wood articles.
Risk	A probabilistic term that attempts to quantify potential adverse effects associated with specific exposures to humans and their environment.
Saw log quality trees	<i>Pinus radiata</i> trees from Chile and <i>P. radiata</i> or Douglas-fir trees from New Zealand that are plantation-grown and are living, healthy, and have no apparent signs of disease or pest infestation.
Silviculture	The cultivation of trees; the practice of managing forest land for timber and dealing with the development and care of forests.
<i>Sirex</i>	The type genus of the family Siricidae including various horntails that are destructive pests of unseasoned lumber from coniferous trees.
Stipulation	An administrative civil penalty settlement between APHIS and an alleged violator.
Suppression	Reduction of a pest population to a level below some predetermined economic threshold.
Taxonomic	Of or relating to or having classification, especially of plants, animals, and microorganisms on the basis of differences and similarities among them.
Tropical hardwoods	Hardwood timber species which grow only in tropical climates.
Uncertainty	May be due to missing information or gaps in scientific theory. Whenever uncertainty is encountered, a decision, based upon scientific knowledge and policy, must be made. The term “scientific judgment” is used to distinguish this decision from policy decisions made in risk management.
Vector	An organism, such as an insect, that transmits pathogens to plants or animals.

Virulent	Characterized by the capacity of a micro-organism to overcome the body defenses of the host.
Welfare gain/loss	The expected benefits and costs to consumers and producers. Welfare gains and losses described in the “Economic Analysis for the Wood Import Regulations” are partial, in the sense that societal gains for exotic plant pest exclusion are not included in the estimates.
Workload Accomplishment Data System	Compilation of workload statistics as reported by APHIS inspectors.
Wood chips	Wood fragments broken or shredded from any wood.

Appendix F. Final Rule for Importation of Logs, Lumber, and Other Unmanufactured Wood Articles

The final rule for Importation of Logs, Lumber, and Other Unmanufactured Wood Articles, published in the *Federal Register* (60 FR 27665-27682, May 25, 1995), is provided in this appendix.

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This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

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DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Parts 300 and 319

[Docket No. 91-074-6]

RIN 0579-AA47

Importation of Logs, Lumber, and Other Unmanufactured Wood Articles

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are establishing comprehensive regulations concerning imported unmanufactured wood articles. The new regulations will affect persons importing logs, lumber, bark chips, wood chips, certain wood packing materials, and other unmanufactured wood articles. We are also amending several existing regulations to remove provisions concerning the importation of certain wood articles, and to state that such articles will instead be covered under the new regulations. We are also incorporating by reference Agriculture Handbook 188, the "Dry Kiln Operator's Manual," which contains treatments authorized by this final rule. We are taking these actions because there is increased interest in importing large volumes of unmanufactured wood articles into the United States, and prohibitions and restrictions are necessary to eliminate any significant plant pest risk associated with importing these articles.

DATES: Final rule effective August 23, 1995. The Director of the Office of the Federal Register approved the incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51 on August 23, 1995.

FOR FURTHER INFORMATION CONTACT: Mr. Richard L. Orr, Senior Entomologist,

APHIS, Policy and Program Development, Planning and Risk Analysis Systems, 4700 River Road Unit 117, Riverdale, MD 20737-1238, 301-734-8939.

SUPPLEMENTARY INFORMATION:

Background

The Animal and Plant Health Inspection Service (APHIS) is establishing comprehensive regulations to eliminate any significant plant pest risks presented by the importation¹ of logs, lumber, and other unmanufactured wood articles.

A changing national and world economy has recently increased the incentives to import wood that may present a significant increase in the risk of plant pest introduction into the United States. An example of this change is the interest of sawmills and other wood processors in utilizing foreign sources of wood to offset expected harvest reductions in the United States, or to provide raw materials for their facilities at prices competitive with or better than domestic prices.

Trees produced in many foreign locations are attacked by a wide variety of exotic plant pests and pathogens that do not occur in this country. Logs and other unmanufactured wood articles imported into the United States could pose a significant hazard of introducing plant pests and pathogens detrimental to agriculture and to natural, cultivated, and urban forest resources. Plant pests and pathogens introduced into the United States in the past, such as the gypsy moth and the agents of Dutch elm disease and chestnut blight, have caused billions of dollars of damage to United States forest and plant resources.

Until recently, the quantity and variety of unmanufactured wood imported were very limited, and there was little need to develop regulations specifically to address such imports. With few exceptions (see the discussion below of interim regulations allowing importation of certain logs from Chile and New Zealand), APHIS has been dealing with such imports only by detaining shipments at ports of first arrival for inspection, and ordering further action if warranted pursuant to

¹ Throughout this document, the words "import" and "importation" are used to mean moving or bringing articles into the territorial limits of the United States.

the Federal Plant Pest Act and regulations issued under that Act (7 CFR part 330). In addition, APHIS has prohibited the entry into the United States of logs from the former Soviet Far East and Siberia because a detailed plant pest risk assessment found that dangerous plant pests could occur in such logs and may be introduced with them.

However, when large volumes of wood imports are involved, inspection at the port of first arrival without other conditions relating to the wood imports is not practical or adequate for preventing the introduction of plant pests associated with imported wood. Interest in importing logs and other unmanufactured wood articles from various countries is increasing rapidly toward a point where inspection and control activities solely at the port of first arrival will not be feasible. There is currently an intense commercial interest in developing a long-term industry in the Pacific Northwest for importing and processing logs from foreign countries. There is also potential for increased log and other unmanufactured wood article imports into other areas of the United States.

Interim Rules Affecting Certain Logs From Chile and New Zealand

An interim rule published in the *Federal Register* on February 16, 1993, and effective January 19, 1993 (58 FR 8524-8533, Docket No. 91-074-4), established importation requirements for Monterey pine and Douglas-fir logs from New Zealand. Plant pest risks associated with importing these articles, and import requirements that would reduce these risks to insignificant levels, were identified early in the course of developing comprehensive wood import regulations. Therefore, to reduce these plant pest risks as soon as possible, we established regulatory requirements in 7 CFR 319.40-1 through 319.40-8 for certain logs from New Zealand.

A second interim rule published in the *Federal Register* on November 9, 1993 (58 FR 59348-59353, Docket No. 91-074-5), and effective November 2, 1993, established importation requirements for Monterey pine logs from Chile. This interim rule applied the same requirements to Monterey pine logs from Chile that the first interim rule applied to Monterey pine and Douglas-fir logs from New Zealand.

This final rule replaces the regulations established by the interim rules with comprehensive regulations affecting importation of unmanufactured wood articles from all places, including Chile and New Zealand. The provisions contained in this rule for Monterey pine logs from Chile, and for Monterey pine and Douglas-fir logs from New Zealand are essentially the same as the requirements imposed by the interim rule, except that the interim rule used slightly different definitions due to its limited scope.

Proposed Rule

On January 20, 1994, we published a document in the *Federal Register* (59 FR 3002-3029, Docket No. 91-074-3) proposing to replace the interim regulations, "Subpart—Logs from Chile and New Zealand," with a new "Subpart—Logs, Lumber, and Other Unmanufactured Wood Articles" containing prohibitions and restrictions concerning imported unmanufactured wood articles.

The proposed rule, and this final rule, are based on an approach that gives importers three complementary options for importing regulated articles. These are:

(1) If the regulations contain specific requirements for importing a specific article from a specific country or area, you may import the article by complying with those requirements. Examples of this option include the importation of Monterey pine logs and raw lumber from Chile and New Zealand in accordance with the requirements of § 319.40-5, "Importation and entry requirements for specified articles." We intend to add more articles, countries or areas from which articles may be imported, and importation requirements to this section as new requests to import various articles are evaluated and approved.

(2) If the regulations do not contain specific requirements for importing the article you wish to import, or if you believe the article may be safely imported under less stringent conditions than the regulations require, you may submit an application for a permit to import the article, and describe in the application information about the article's origin, processing, treatment, and handling. We will evaluate the permit request, conducting plant pest risk assessments as necessary, and if we determine that the article may be safely imported under conditions not already in the regulations, we will institute rulemaking to add the appropriate articles and conditions to § 319.40-5, "Importation and entry requirements for specified articles."

(3) If the regulations do not contain specific requirements for importing the article you wish to import, you may wish to import the article before there is time to complete plant pest risk assessments and add the article and the necessary specific importation requirements to the regulations. In this case, you may import the article by complying with one of the universal importation options in § 319.40-6. These universal options employ heat treatment and other conditions for importing logs and lumber not otherwise enterable. These universal options are relatively stringent, because they must eliminate the spectrum of potential plant pests and address risks that have not been characterized. The universal options are designed to give importers a way to import articles that would otherwise be prohibited until detailed plant pest risk assessments are completed. Whenever feasible, importers may choose to employ universal options while plant pest risk assessments and rulemaking are underway to establish less stringent requirements for the articles they wish to import. Importers of some articles may find that complying with a universal option is the most feasible and cost-effective way to import their articles.

Comments on the Proposed Rule

We solicited comments concerning our proposal for a 90-day comment period ending April 20, 1994. We received 56 comments by that date. Eleven were from companies and industrial associations involved in the harvesting and importation of logs and other wood products, or the manufacturing of wood products that could be derived from such imports, or the sale of products or processes used in such manufacturing. Eleven comments were from environmental organizations. Six comments were from universities. Four comments were from State agencies involved in forestry or agriculture. Four comments were from agencies of the Canadian government, and one from the Delegation of the Commission of the European Communities. National associations representing Federal and State employees involved in forestry, American growers of nursery stock, and interested members of the public also submitted comments.

We carefully evaluated these comments. While most supported implementing regulations addressing the importation of wood, many raised questions about how to do so in an optimally effective manner. These comments are discussed below in detail.

In response to the comments, APHIS is making eight changes to the proposed requirements. These changes are:

1. *Change the standard for heat treatment and heat treatment with moisture reduction from 56 °C for 30 minutes to 71.1 °C for 75 minutes.* This change is in response to several commenters who recommended that APHIS use 71.1 °C for 75 minutes as reported in the Forest Service's Scientific Panel Review of January 10, 1992—Proposed Test Shipment Protocol for Importing Siberian Larch Logs. Upon reviewing this research and our data from the proposal supporting a lesser temperature-time combination, we believe we were in error in believing that the proposed heat treatment would effectively eliminate all plant pests of concern. Specifically, a heat treatment of 56 °C for 30 minutes could allow various harmful fungi to survive. Research reports show that various fungi in wood can survive 1 to several hours of heat treatment at temperatures ranging from 56 °C to 70 °C, but are destroyed by a treatment of 71.1 °C for 75 minutes. The heat treatment required by the regulations must be able to effectively destroy all potentially dangerous fungi. Therefore, we are changing the requirements for heat treatment and heat treatment with moisture reduction in § 319.40-7 (c) and (d) to specify 71.1 °C for 75 minutes. We will allow heat treatment at lower temperatures only in specific kiln drying processes where the fungicidal action of the heat is extended over a long period of time and is complemented by moisture reduction (see below).

2. *Allow kiln drying conducted in accordance with acceptable industry practices to qualify as heat treatment with moisture reduction, in lieu of a specific temperature-time combination.* As proposed, heat treatment with moisture reduction had to raise the temperature at the center of the treated article to 56 °C for 30 minutes. If we changed this provision consistent with the above change in the temperature and time of heat treatments (i.e., 71.1 °C for 75 minutes), then most articles kiln dried according to industry practices would not qualify as heat treated with moisture reduction, even though they meet the dryness standard of the regulations (a moisture content of 20 percent or less, as specified in § 319.40-7(d)).

In fact, research shows that while some fungi survive temperatures between 56 °C and 70 °C for relatively short periods, all harmful fungi are destroyed by kiln drying that is conducted according to standard

industry practice, which often dries wood at lower temperatures over a period of 1 to many days, reducing the moisture content eventually to 20 percent or less.

In summary, heat treatment with moisture reduction is an effective treatment if it is employed in either of two ways. It may reduce the moisture content of the article quickly, by employing a temperature of 71.1 °C for 75 minutes or more; or, it may reduce the moisture content more slowly by employing standard industrial dry kiln practices using a lower temperature.

Several commenters suggested that to allow industry to use commonly employed kiln drying techniques to the extent they are effective, we should modify the requirement for heat treatment with moisture reduction. They cited a publication of the Forest Service which the wood industry relies on to specify acceptable kiln drying practices. This publication is the Dry Kiln Operator's Manual, Agriculture Handbook 188.

We agree with these comments, and are changing the requirement for heat treatment with moisture reduction in § 319.40-7(d) to provide that heat treatment with moisture reduction may employ:

1. Kiln drying conducted in accordance with the schedules prescribed for the regulated article in the Dry Kiln Operator's Manual, Agriculture Handbook 188, which is incorporated by reference at § 300.1 of this chapter; or,

2. Dry heat, exposure to microwave energy, or any other method that raises the temperature of the center of each treated regulated article to at least 71.1 °C, maintains the regulated articles at that center temperature for at least 75 minutes, and reduces the moisture content of the regulated article to 20 percent or less as measured by an electrical conductivity meter.

We are also incorporating by reference, in 7 CFR 300.1, the Dry Kiln Operator's Manual.

3. *Allow noncontainerized wood chips to be imported under certain conditions.* Many industry commenters cited a substantial economic burden if they had to import wood chips only in sealed containers, rather than on deck or in open containers. Several suggested allowing some wood chips to be imported on barges or other vessels, covered by tarpaulins, if the wood chips come from a relatively low-risk source (live healthy trees from a managed tropical plantation) and are alone on a vessel (no other regulated articles) that is moved directly to the United States.

We agree with this suggestion. Wood chips derived from live healthy trees from a managed tropical plantation are not likely to present plant pest risks that would not be controlled by the limits imposed by the regulations on the use of the chips. This is because there are few forest pests present in tropical climates that can survive winters in temperate climates. The few tropical plant pests that can survive temperate winters would likely be excluded from managed tropical plantations by the plant pest control practices employed at such plantations. If such chips are imported alone on a vessel and covered by a tarpaulin, there is little risk that the chips will be infested during transit by plant pests from higher-risk wood products. On the other hand, wood chips from unmanaged trees and trees in temperate areas are more likely to present serious plant pest risks. These chips should be subject to the full restrictions proposed for wood chips in the proposed rule, i.e., they should be imported in sealed containers, and subject to fumigation or heat treatment, to prevent the introduction of plant pests they may harbor.

Therefore, we are changing § 319.40-6(c)(2), the universal importation requirement for wood chips and bark chips, by adding the following sentence: "If the wood chips or bark chips are derived from live, healthy, plantation-grown trees in tropical areas, they may be shipped on deck if no other regulated articles are present on the vessel, and the wood chips or bark chips are completely covered by a tarpaulin during the entire journey directly to the United States."

4. *Allow pallets to be imported in accordance with the requirements for solid wood packing materials, even if the pallets are imported as cargo.* Several commenters noted that pallets should be allowed to be imported as cargo under no greater restrictions than if they are imported in actual use as packing. They pointed out that in normal shipping practice, large amounts of pallets are used to ship articles to a port, and then may be shipped as cargo from ports with a pallet surplus to ports with a pallet shortage. Commenters felt that pallets that have been in use, and have met the regulatory requirements for importation in use, do not present significant risks and should not have to meet additional requirements if they are subsequently moved as cargo.

We agree. We are changing § 319.40-3(b) to allow pallets that are imported as cargo to be imported under the same requirements that apply to pallets that are in use as packing materials at the time of importation. Briefly, these

requirements are that if the pallets are free from bark and are used for articles that are not regulated articles, they must be accompanied by an importer document stating that they are totally free from bark, and apparently free from live plant pests. If the pallets are free from bark and are used for regulated articles, they must be accompanied by an importer document stating that they are totally free from bark, apparently free from live plant pests, and have been heat treated, fumigated, or treated with preservatives in accordance with § 319.40-7, or meet all the importation and entry conditions required for the regulated article the solid wood packing material is used to move. If the pallets are not free from bark, they must be accompanied by an importer document stating that the pallets have been heat treated, fumigated, or treated with preservatives in accordance with § 319.40-7. In all cases, the pallets are also subject to the inspection and other port of arrival requirements of § 319.40-9.

5. *Exclude European Russia from the group of Asian countries to which more severe prohibitions and restrictions apply.* Several commenters noted that the apparent intent to exclude European Russia from these more severe requirements was not carried out by the precise language, allowing many importations to occur from all places "except countries in Asia that are wholly or in part east of 60° East Longitude and north of the Tropic of Cancer." Russia does extend east of 60° East Longitude. It was not our intent to include European Russia in this area, as can be seen from the context of the language in the preamble of the proposed rule. Therefore, we are changing this geographic description each time it appears to read "except places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer."

6. *Continue to allow the ongoing importation of railroad ties from countries outside Asia, for subsequent pressure treatment and use in the United States, which APHIS has allowed to occur for some time.* Commenters noted that these articles are normally treated within 30 days, and have been considered low risk. We agree that the regulations should continue to allow the importation of these railroad ties. We are adding the following new paragraph (f) to § 319.40-5, the section concerning importation requirements for specified articles: "Cross-ties (railroad ties) from all countries except places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer may be imported if completely

free of bark and accompanied by an importer document stating that the cross-ties will be pressure treated within 30 days following the date of importation."

7. Amend the definition of "Log" so that it includes cants sawn from logs. One commenter pointed out that by his reading of the regulations, it seemed likely that cants (partly trimmed logs) were subject to the same requirements as logs, but the regulations did not make this point absolutely clear. We did in fact intend that the regulations treat logs and cants the same. To make this clear, we are revising the proposed definition of "Log," which read "The bole of a tree; trimmed timber that has not been further sawn," to read "The bole of a tree; trimmed timber that has not been sawn further than to form cants."

8. Amend the requirements for completing an application for an import permit to require that the applicant specify not only any chemical treatments that will be employed prior to or after importation, but also the dosage of the chemicals that is employed. One commenter pointed out that the permit application procedure in proposed § 319.40-4(a) required the applicant to provide, among other information, the names of any chemicals employed in treatments prior to or after importation (proposed § 319.40-4(a) (4) and (5)). He suggested that the application should also include the dosage used for such treatments, so that APHIS and the public can judge whether the treatments are effectively applied. We agree, and are adding a requirement for dosage information to the affected sections.

With the exception of the changes just discussed, and minor editorial changes, we are adopting the provisions of the proposed rule as a final rule. Additional comments are discussed below.

Goals and Mission of APHIS as They Relate to the Proposed Rule

Comment: APHIS should not consider the needs of international trade but should focus exclusively on pest exclusion as worded in the Federal Plant Pest Act of 1957.

Response: It is important to recognize that APHIS has a number of responsibilities and legal mandates beyond the Federal Plant Pest Act. These include international trade agreements such as the General Agreement on Tariffs and Trade and the North American Free Trade Agreement, statutes such as the Regulatory Flexibility Act and the Paperwork Reduction Act, Executive Orders, and additional legal and policy guides. One of APHIS's basic responsibilities is plant

pest exclusion, but this has to be conducted in balance with other national needs and goals.

The majority of comments which specifically addressed the issue of balancing the needs of international commerce with prevention of pest introduction clearly favored such a balancing. However, some commenters believed that APHIS should reduce or terminate raw wood exports, so that wood could be used to meet domestic needs, removing the need for the importation of raw wood. APHIS does not have statutory authority to stop or reduce the export of raw logs by U.S. private land owners and companies so that the wood can be used for domestic needs.

Opposition to the Importation of Unmanufactured Wood

Comment: APHIS should restrict imports to manufactured and/or finished wood products only.

Response: APHIS believes that this approach is too extreme. With proper mitigation and monitoring, the importation of some raw wood material from certain locations presents an insignificant plant pest risk.

Limitations of the Pest Risk Assessment Process

Comment: Some comments were directed toward the risk assessment process. A few were concerned that the process did not fully address the unknowns, did not address enough pests, or did not incorporate the full scope of experts needed.

Response: The risk assessments conducted by the Forest Service were the most resource extensive risk assessments ever utilized by APHIS to determine the plant pest risk associated with an imported commodity. Great care was taken to choose which assessments needed to be completed before the rule was written. The first assessment focused on raw timber from Siberia, which was identified as extremely high risk. From this assessment, some universal requirements for the rule were derived. Two additional risk assessments were conducted on those timber commodities which were identified as lower risk (specific species of plantation grown trees from New Zealand and Chile). The specific requirements for these commodities were developed from these assessments.

APHIS recognizes both the need for future assessments and the need to improve the risk assessment process. The risk assessment process used for the various assessments was derived from the National Research Council's section on ecological risk assessment as

published in its 1993 "Issues in Risk Assessment" and represents the state of the art as it now stands for conducting ecological risk assessments.

APHIS recognizes that the process is not perfect and that evolution will continue to be necessary. The risk assessment process is being, and will continue to be, modified and improved to make sure that it is the best that the science of ecological risk assessment can provide.

One of the most difficult issues is how to assess the risk associated with unknown organisms, or with known organisms that do not have well-described characteristics or survival and spread capabilities. The regulations are designed to ensure that there is an insignificant risk that importing regulated articles will result in the entry and establishment of either known or unknown dangerous plant pests.

Need for More Assessments of Additional Log Species

Comment: APHIS needs to complete additional assessments for various timber products considered for importation.

Response: APHIS agrees, and with the cooperation of the Forest Service, will continue to conduct risk assessments and amend regulations based on them, as appropriate.

Packing Material

Comment: The regulations proposed for solid wood packing materials are too restrictive.

Response: We also received comments stating that the regulations proposed for solid wood packing materials are necessary and appropriate. We believe that the requirements in this final rulemaking document for the importation of solid wood packing materials are necessary to prevent the introduction of plant pests into the United States.

Temperate Hardwoods, Tropical Hardwoods, and Chips

Comment: Temperate and tropical hardwoods should be subject to entry requirements that are as strict as those for temperate softwoods.

Response: The volume of imported temperate and tropical hardwoods has remained at a low sustained level. These small shipments of high priced logs and lumber can be monitored and controlled much more easily than the proposed large shipments of softwood logs.

Comment: The proposed regulations for wood chip importations are too restrictive and it would not be feasible for importers to meet the requirements. The 30-day time limit for processing

wood chips after importation is too short, and the proposed requirement for containerized transportation of wood chips is unnecessary and costly.

Response: APHIS believes that the 30-day limit for processing the chips is reasonable. The extension to 60 days requested by several commenters would present additional concerns with monitoring and increased plant pest risk. One commenter was under the incorrect assumption that the chips still had to be processed within the 30-day period if they had been subjected to an approved fumigation. This is not the case. The 30-day limitation is directed toward raw, untreated chips.

The changes we are making to the proposed requirement for containerized transportation of wood chips are discussed above.

Methyl Bromide

Comment: In view of the negative effects of methyl bromide (MB) on the ozone layer, APHIS should not rely upon use of MB. Also, the regulations do not include plans for how APHIS will deal with articles requiring MB fumigation after MB is removed from regulatory use around the year 2001.

Response: APHIS is concerned about the effects of MB on the ozone layer and will abide by the Environmental Protection Agency's phase-out schedule. However, present reliance by commerce on MB is such that immediately terminating all regulatory use of MB is not realistic.

The regulations were written with the phase out of MB in mind. All MB requirements presented in the regulations have alternative treatments. It is APHIS's hope that industry will develop and implement alternative mitigation schedules (e.g. irradiation, heat, borate, etc.) to replace its reliance on methyl bromide for the importation of regulated articles.

Bark Removal on Temperate Softwood Logs

Comment: Temperate softwood logs should be required to have 100 percent of the bark removed before importation, since even small patches of bark can harbor insect pests.

Response: APHIS recognizes that 100 percent debarking of logs is not realistic. It is important to remember that APHIS requires either a heat treatment or fumigation to complement the debarking of temperate softwood logs. This combination of debarking with other mitigation requirements is sufficient to destroy plant pests of concern in the bark or directly under the bark.

Other Comments and Responses

Comment: APHIS should add other treatments, such as irradiation and borates, to the universal importation requirements.

Response: APHIS recognizes the potential value of irradiation, borates, and other treatments for use as universal or specific treatments. Ongoing research into the use of irradiation and borates on timber products looks promising. However, the data is not yet complete to the extent necessary for APHIS to propose specific treatments. Irradiation treatments as well as other alternatives will be added to the regulations as they are developed and proven both effective and operationally feasible.

Comment: For logs imported from Chile and New Zealand, APHIS should change the regulations to facilitate on-deck fumigation and transport of logs, and extend the time period for processing such imported logs after they are imported (currently 60 days).

Response: The restrictions associated with the movement of logs from Chile and New Zealand prompted a number of responses from industry. Extending the time allowed to process the logs once they enter the United States and allowing the fumigation and movement of logs on the deck of ships were the two most stated requests.

APHIS believes that allowing additional time beyond 60 days for processing the logs would make monitoring difficult and increase the plant pest risk. Therefore, APHIS will maintain the 60-day requirement.

APHIS has prohibited the movement of logs on the open deck of ships because of the possibility of infestation of the logs while at the port of origin and/or other foreign ports visited while the ship is in transit. APHIS believes that until the issue of infestation during shipment to the United States is satisfactorily answered, the movement of logs on the open deck of ships must continue to be prohibited.

Comment: The regulations should specify strong penalties that will be imposed on persons who do not comply with the regulations. The regulations should also make importers financially responsible for damages and control costs resulting from pests introduced through their shipments.

Response: For an importer, the primary practical consequence for non-compliance is future ineligibility to import additional shipments.

USDA has no authority to require importers to post bonds or otherwise stipulate their financial responsibility for costs that may result from introduced plant pests. However,

individual shipments will be refused entry unless the shipments comply with regulatory requirements.

APHIS can also respond to violations by canceling compliance agreements. Because domestic processing facilities must hold a current compliance agreement to import and process many types of regulated articles in the regulations, APHIS can stop violators from importing articles by canceling or refusing to sign a compliance agreement.

In addition, statutory authority allows us to impose civil and criminal penalties on violators. Individuals also have recourse through the courts; persons who believe they suffered harm due to an importer who did not comply with regulatory requirements may file a civil suit against that importer.

Comment: APHIS must allocate additional resources and personnel, especially inspectors at ports and sawmills processing imported wood, if the regulations are to be successfully enforced and monitored.

Response: We agree that adequate resources and personnel, especially inspectors, must be devoted to prevent the introduction of plant pests into the United States. Adjustments in the level of personnel and resources devoted to APHIS programs are a normal part of management in the agency. Duties and staffing levels will be adjusted, at ports and elsewhere, to take the needs of the new wood import program into account.

While APHIS will assign some personnel to major ports to work specifically with wood imports, and will assign some personnel to work specifically with monitoring compliance both overseas and in domestic processing facilities, we believe much of the resources needed for this program are already in place, in the form of existing APHIS port personnel and cooperating personnel from State plant protection agencies.

Funding levels and agency personnel may vary from year to year. Import authorizations will not be provided if the level of resources decreases below the level needed to ensure that all imported regulated articles are subject to the level of inspection and monitoring necessary to prevent the introduction of plant pests into the United States.

Regarding APHIS resources needed to ensure compliance with the regulations, commenters should be aware that user fees we collect for some program operations will help to ensure that the needed resources are available.

Comment: The regulations would allow importers to self-certify, in the "importer document," information

about the type, quantity, and origin of imported articles and any treatments that have been applied to them. This self-certification is not an adequate substitute for a certificate issued by a plant protection organization recording the required information. You cannot rely on importers to honestly and completely record the necessary information in an informal importer document. In particular, exports from the former Soviet Union are subject to rampant corruption, forgery of documents, and smuggling.

Response: Questions about enforcement of regulations and how to deter violators who may present inaccurate information and documents opens up a complex nest of issues much larger than any single regulation. The general position of APHIS on these issues is as follows:

1. *Violations are most likely when the profit for the violator is high and the risk is low.* APHIS plans its enforcement activities accordingly. We tend to scrutinize carefully large shipments of regulated articles, especially those of particularly valuable species. We employ various means to independently verify the accuracy of documents associated with these shipments—whether the documents are issued by an importer or by a government agency. We keep importers aware of the risks they face if they file inaccurate documents or fail to meet regulatory requirements. These risks include civil penalties, criminal fines and jail sentences, and loss of business due to APHIS rejection of permit applications and compliance agreement applications. Generally, wood commodities are not so lucrative that an importer would risk these penalties, especially long-term loss of business, for the sake of fraudulently importing any one shipment. We intend to vigorously publicize our enforcement activities related to this final rule during the initial implementation period, to make potential violators aware of the risks they face.

2. *Self-certification has worked in other programs.* Many APHIS and other Federal agencies have programs that rely in part on regulated individuals providing accurate certifications to the agency. Experience has shown that these programs can work when the interests of both the regulated party and the agency are served by accurate self-certification. Examples of APHIS programs that have successfully employed self-certification include the domestic Gypsy Moth quarantine under 7 CFR 301.45 through 301.45-12 (in which businesses operating under compliance agreements may issue certificates), and the importation

program for greenhouse-grown potted plants from Canada under 7 CFR 319.37-4(c) (in which greenhouse growers apply labels which certify that their plants meet certain growing requirements). Such programs work, in part, because our inspectors learn to evaluate the accuracy of self-certifications through visual examination of the materials and through independent sources of information. The programs also work because they are generally employed where the regulated parties have a financial reason to desire a continuing relationship of trust with the regulating agency, so they can continue to do business. This is the case with importer documents employed in this final rule.

3. *The accuracy of self-certifications is often empirically tested at the port of first arrival.* Much of the information in importer documents can be independently checked, sometimes by direct inspection and testing. Inspectors can discover a great deal about the accuracy of documents concerning a shipment by looking for plant pests and evidence of treatments in the articles. Moisture content can be directly measured at ports to determine whether kiln drying has occurred. Fraudulent importer documents will often conflict with waybills, valid importer documents from earlier shipments, and other records. We intend to use all of these opportunities to enhance enforcement and create a culture in which importers see that issuing inaccurate documents is not worth the risk.

4. *Individual "high-crime" areas of international trade must be addressed in a larger forum than just the wood regulations.* We agree that doing business in the former Soviet Union presents severe problems for honest businesspersons and the customs services of many countries. There is widespread smuggling, forgery of documents, and coercion of officials related to exports from this area. While we are not aware of significant criminal activities affecting unmanufactured wood exports from the former Soviet Union, this may be because such exports to the United States have not been allowed to occur in significant quantities until now.

For these reasons, we will take particular care in enforcing regulatory requirements with regard to the importation of regulated articles from the former Soviet Union. As discussed above, there are numerous methods available to APHIS to confirm that the importation of regulated articles meets the regulatory requirements. We intend to employ them vigorously.

There is an ongoing, international effort to reduce the level of smuggling, fraud, and other criminal activity associated with exports from the former Soviet Union. The State Department and the Federal Bureau of Investigation are working with their counterparts in other countries and in the former Soviet republics to try to stabilize the situation, and APHIS will monitor the results of these efforts to determine what level of enforcement activity needs to be directed toward shipments of regulated articles from the former Soviet Union.

Comment: The regulations should minimize the costs associated with importing wood by imposing requirements that are both effective in pest control and cost efficient. To keep costs under control, the regulations should not include additional controls beyond those needed to control pest risk.

Response: We agree, and believe we have designed the regulations to effectively exclude plant pests at minimal cost. Wherever we had two or more alternative, equally effective control methods, we wrote the regulations to allow importers to choose whichever method was less costly and disruptive to commerce in their particular cases. Whenever control methods with significant costs were necessary, such as heat treatment, we avoided using detailed "design standards" that can add to costs by requiring treatment facilities to be built and operated in particular ways. Instead, we have employed "performance standards" that allow maximum freedom for innovation and cost savings to regulated parties.

Comment: In developing the proposed rule, APHIS failed to adequately communicate with the affected parties and the public. Only 10 representatives of environmental public interest organizations were on the distribution list for National Environmental Policy Act (NEPA) materials associated with the rule, and Indian Tribes with extensive forest holdings were not contacted.

Response: We disagree. APHIS had numerous contacts with potentially affected groups prior to rulemaking. We actively sought information from academic, environmental, and industry organizations and encouraged them to involve their constituents in contributing to APHIS development of a proposed rule. We sent representatives to forestry conferences to explain APHIS perspectives early in the process. We developed a mailing list of persons and organizations interested in potential rulemaking for wood imports, which grew to over 500 members by the time

the proposal was drafted. Persons on this list were informed of each significant step that preceded the proposal, for example, public meetings, plant pest risk analyses, and interim APHIS requirements at ports. We published an advance notice of proposed rulemaking prior to the proposed rule. We also established an electronic bulletin board, accessible by direct dial and through the Internet, to distribute copies of the proposed rule and associated documents and to accept public comments on the proposal. These activities resulted in far greater early public involvement than is usual for a Federal informal rulemaking proceeding.

Also, publication of the proposed rule in the *Federal Register* meets the minimum procedural standard for adequate public notice. We believe our outreach activities far exceeded this minimum standard. Certainly, any individual or group that was interested in the wood imports issue and was involved with the media and forums where wood and forestry issues are normally discussed had ample notice of, and opportunity to participate in, APHIS decisionmaking prior to the issuance of the proposed rule.

Comment: To ensure consistent nationwide requirements for importing wood, and to facilitate interstate and international commerce, the APHIS regulations should preempt all State and local requirements for wood imports. Officials in various States appear to have very different understandings of what authority they have over imports and how they are to interact with APHIS personnel.

Response: Executive Order 12612, "Federalism," instructs Federal agencies not to take actions that exceed the powers enumerated for the Federal government in the Constitution, and not to unnecessarily preempt State law or preclude States from developing policies and taking actions at their discretion. We do not believe the proposed changes to the regulations raise Federalism implications in terms of the Executive Order. The regulations address how a Federal agency will conduct operations of a Federal program, and do not preclude States from developing policies or exercising their authority to involve their employees in any plant protection programs developed by a State. States are free to pass laws or implement regulations for State plant protection programs. However, State programs may not add requirements for importing regulated articles that are inconsistent or in conflict with the requirements established by the Federal regulations.

States may not cite their participation in the enforcement of the Federal regulations as the basis for also enforcing additional requirements that are not contained in the Federal regulations.

In the "Executive Order 12778" section of the proposed rule, we stated "If this proposed rule is adopted: (1) All State and local laws and regulations that are inconsistent with this rule will be preempted * * *." We believe State and local laws and regulations would be inconsistent with our rule if they prohibit imports allowed by our regulations, or if they impose conditions on importation that are in addition to the conditions set forth in this final rule. States may impose requirements in accordance with State law that are not inconsistent with our regulations.

Executive Order 12866 and Regulatory Flexibility Act

We are issuing this final rule in conformance with Executive Order 12866. This rule has been determined to be significant and has been reviewed by the Office of Management and Budget under Executive Order 12866.

We have prepared an economic analysis concerning this final rule. This analysis indicates that this rule will not have significant annual effects on the economy. Copies of the economic analysis may be obtained by sending a written request to APHIS, Policy and Program Development, Regulatory Analysis and Development, 4700 River Road Unit 118, Riverdale, MD 20737-1238. Copies of the economic analysis are also available for inspection at USDA, room 1141, South Building, 14th Street and Independence Avenue SW., Washington, DC, between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to inspect the analysis are requested to call ahead on (202) 690-2817 to facilitate entry at the reading room.

The United States has become the world's leading importer of unmanufactured wood. In 1990, the United States imported the equivalent of 34.4 million cubic meters (CBM) of logs, lumber, and other unmanufactured wood valued at about \$5.1 billion. Total imports nearly tripled between 1950 and 1990, with most of this increase occurring after 1970. Historically, Canada has supplied the United States with virtually all of its unmanufactured wood imports.

Domestic production of logs, lumber, and other unmanufactured wood has increased steadily since 1950. In roundwood equivalents, production in 1990 was 1.6 times greater than in 1950. Most timber production occurs in

southern and western States. In 1990, Oregon and Washington accounted for about 16 percent of the total U.S. tree harvest.

Domestic logging companies are facing increasing challenges from conservation groups. Conservationists are opposed to many tree harvesting practices, especially clear cutting. In addition, concern over habitats for wildlife has raised questions about replacement of old growth/diversified forests with monoculture. Conservation issues are likely to limit future tree harvests in several northwestern States.

Nationally, commercial forest lands are projected to decrease by about 4 percent over the next 50 years. Production is likely to decline in the Pacific Northwest and increase in the South and Rocky Mountain States.² A slightly limited domestic harvest combined with higher consumer demand would likely result in an increased demand for imported wood and wood products. Alternative supplies of logs and other wood products have been located in the former Soviet Union, New Zealand, Chile, Brazil, and other countries. Wood imports from alternative sources have the potential to introduce and disseminate exotic plant pests and diseases throughout the United States.

This final rule regulates the importation of logs and other unmanufactured wood products from all areas. There are exemptions from some requirements for imports from Canada and Mexican border states because most insects and other wood pests in these areas are also indigenous to the United States, or will become so through natural migration. Therefore, wood imports from Canada and Mexican border states do not pose a significant risk of exotic plant pest introduction.

The regulations will reduce to an insignificant level the risk of entry and dissemination of plant pests associated with unmanufactured wood imports. Some regulated wood products are prohibited importation based on plant pest risk assessments that reveal more than an insignificant risk of the introduction of plant pests. Unrestricted trade in unmanufactured wood would likely result in losses to domestic agriculture from plant pest damage. Without governmental regulation, private entities might engage in trading activities that would result in the introduction of plant pests into the United States.

² Over the next 50 years, new technologies may allow wood products companies to remove larger amounts of wood products from each tree.

The following items are subject to the regulations: logs; wood chips; lumber; whole trees; portions of trees not consisting solely of leaves, flowers, fruits, buds, or seeds; bark; cork; laths; hog fuel; sawdust; painted raw wood products; excelsior; wood mulch; wood shavings; pickets; stakes; shingles; solid wood packing materials; humus; compost; and litter. Manufactured wood products are not regulated by the rule. The regulations require that certain specified imported unmanufactured wood products be treated prior to arrival in the United States.

In 1990 the United States imported about 255,800 CBM of unmanufactured wood that would require treatment under the final regulations. These unmanufactured wood imports accounted for less than one percent of total 1990 domestic supplies. Imported shipments of kiln dried lumber are not required to be treated.

About 4.1 million newly manufactured units of wood dunnage were imported as cargo from regulated areas in 1990. Dunnage imported as cargo can be manufactured from rough untreated lumber that has not been stripped of all tree bark.³ Imports comprised about 27 percent of the newly manufactured dunnage products available in the United States during 1990.

Imports of regulated articles that will now require treatment totaled about \$27.4 million in 1990. Total domestic supplies of these articles exceeded \$80 billion during the same year. Therefore, the value of imports that will require treatment under the final regulations represented less than one percent of total domestic supplies in 1990.

Our economic analysis estimates that this action would increase economic welfare for domestic producers of logs, lumber, and other regulated wood products by about \$35.2 million. However, U.S. consumers of these products will incur a welfare loss of about \$171.9 million.

About 98.8 percent of total estimated losses are attributable to treatment costs for dunnage (including scrap lumber) used to pack various commodities that are imported into the United States. APHIS anticipates that this loss will be mitigated as shipping companies switch to bark free dunnage materials to avoid Q-40 related treatment costs. Shippers will take precautions to ensure that dunnage is bark free before commodities are loaded at the foreign port of origin.

³ For the purpose of this economic analysis, dunnage imported as cargo includes dunnage produced for first time use, and does not include dunnage manufactured from used or scrap lumber.

The Agency maintains that bark free dunnage material is readily available throughout the world and can be substituted at little or no cost. Therefore, APHIS estimates that the required use of bark free dunnage will result in a negligible cost increase to shippers in the long run.

Complying with the rule's requirements may cost U.S. society up to \$136.7 million; this represents the cost of plant pest exclusion. This cost estimate does not include the opportunity cost associated with importation of timber products like Siberian larch that might be imported in the absence of this rule. Data are not available to make this estimate. Additionally, this cost figure does not take into account either the benefits that would be accrued by excluding pests, or the probability that businesses would be able to reduce cost by switching to less costly options such as bark free dunnage.

If the United States does not expend resources to exclude plant pests through regulation or other means, such pests could become established and cause significant damage to domestic agriculture. For example, in the past few years plant pests including the Asian gypsy moth and pine shoot beetle have recently been introduced into the U.S., and several million dollars have been spent on efforts to control and prevent further spread to noninfested areas of the country. A recent USDA Forest Service pest risk assessment concerning potential Siberian timber imports evaluated the potential costs to U.S. society of several nonindigenous plant pests. The risk assessment estimated that introduction of a single pest, larch canker, could cause direct timber losses of \$129.0 million annually. The same study estimated that a worst-case scenario involving heavy establishment of exotic defoliators in the United States could cost \$58 billion (about \$4.1 billion annually). This is a damage estimate of resources that would be lost to established defoliators.

The benefits that would accrue from pest exclusion may be less because control efforts would be put in place to regulate the spread of exotic pests. Total benefits should be calculated as the avoided cost of such control efforts and avoided damages to agricultural and forest resources. However, past experiences with introduced exotic defoliators indicate that control measures would not likely prevent further spread and thus make eradication extremely unlikely.

The initial estimated losses will be offset over time as businesses adapt to new international wood marketing

channels. If resource constraints remain constant after this rule is implemented, consumers will purchase a slightly higher volume of domestic wood products at prices that are slightly higher than those that currently prevail in the U.S. market. However, domestic consumers will continue to supplement their wood and wood product purchases with imports whenever the imported price is lower than the domestic price.

Each year about 6 to 7.5 million non-bulk shipments of various commodities are imported into the United States. APHIS estimates that between 3.6 and 4.5 million (60 percent) of annual imported non-bulk shipments arrive in the United States packed in dunnage made of rough untreated wood with bark. The regulations will prohibit untreated dunnage with bark from entering the United States.

APHIS does not expect the economic impact on U.S. producers of regulated articles to be uniform across the country. Producers in southern and Rocky Mountain States will likely gain more than producers in the Pacific Northwest. Conservation issues and resource constraints will likely limit the amount of welfare gain acquired by loggers and sawmills in Oregon and Washington.

Pursuant to Title II of the Unfunded Mandates Reform Act of 1995 ("the Act"), which the President signed into law on March 22, 1995, USDA has assessed the effects of this rulemaking action on State, local, and tribal governments, and the private sector. This action does not compel the expenditure of \$100 million or more by any State, local or tribal governments, or by anyone in the private sector, and therefore a statement under section 202 of the Act is not required.

The Regulatory Flexibility Act requires that APHIS specifically consider the economic impact of regulations on small entities. Small Business Administration (SBA) data indicates that about 25,998 domestic entities could be impacted by the restrictions on regulated articles. About 25,769 (99 percent) of these entities are classified as small according to SBA criteria. These consist of approximately 14,662 small logging companies or sawmills that produce domestic wood articles, and approximately 15,642 entities that could import foreign wood for processing or resale. (These two figures total more than 25,769 because some firms process or resell both domestic and imported wood.) These small entities should experience most of the anticipated \$35.2 million increase in domestic welfare. This increase will be a small average economic benefit for

affected small entities, as it represents less than one percent of combined average annual sales for impacted small entities. A few small entities will undoubtedly accrue a disproportionate share of the domestic welfare increase due to their individual positions in their markets and variations in business strategies for dealing with new opportunities. The overall impact on small businesses is expected to be minor.

Under these circumstances, the Acting Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

Executive Order 12778

This rule has been reviewed under Executive Order 12778, Civil Justice Reform. This rule: (1) Preempts all State and local laws and regulations that are inconsistent with this rule; (2) has no retroactive effect; and (3) does not require administrative proceedings before parties may file suit in court challenging this rule.

National Environmental Policy Act

In accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 *et seq.*), APHIS has prepared an environmental impact statement (EIS) addressing the importation of logs, lumber, and other unmanufactured wood in accordance with this rule. On August 12, 1994, a notice was published in the **Federal Register** (59 FR 41441) informing the public of the availability of the final EIS.

The final EIS considered and evaluated the six following alternatives:

- Alternative 1—No Action (No Regulations)
- Alternative 2—Final Regulations (Preferred Alternative)
- Alternative 3—Prohibit Untreated Wood Except Packing Material
- Alternative 4—Prohibit Untreated Wood
- Alternative 5—Prohibit Unmanufactured Wood Except Packing Material
- Alternative 6—Prohibit Unmanufactured Wood

The final EIS addressed the potential impacts to the human environment, including possible risks to human health, impacts to forest resources, impacts to biodiversity, impacts from the use of methyl bromide, and impacts to global climate change, cultural resources, and endangered and threatened species. A detailed analysis of potential impacts from the use of methyl bromide was prepared because of the classification of methyl bromide as an ozone depletor.

The analysis of the environmental impacts to all aspects of the human environment revealed that impacts attributable to the six alternatives are virtually identical, but are entirely dependent upon the degree to which plant pests are able to be excluded. Each alternative demonstrated a different likelihood of success.

Alternative 6 is the most protective, that is, the most likely to minimize the risk of plant pest introduction.

However, it is also the most restrictive with regard to importation of unmanufactured wood articles.

Alternative 1, the No Action Alternative, is believed to be the least protective, and more likely than the other alternatives to result in inadvertent plant pest introductions.

Alternative 4 is similar to Alternative 6 in that it is protective but may unnecessarily interfere with trade. The protective capacity of Alternatives 3 and 5 is diminished by the exclusion of packing materials from treatment requirements.

Alternative 2, the Preferred Alternative, offers a balanced approach to the importation of logs, lumber, and other unmanufactured wood articles that requires plant pest treatments in all cases in which APHIS has identified a risk of plant pest introductions. This alternative was selected by the agency and is reflected by this final rule.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this rule have been submitted for approval to the Office of Management and Budget.

List of Subjects

7 CFR Part 300

Incorporation by reference, Plant diseases and pests, Quarantine.

7 CFR Part 319

Bees, Coffee, Cotton, Fruits, Honey, Imports, Incorporation by reference, Nursery stock, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements, Rice, Vegetables.

Accordingly, 7 CFR parts 300 and 319 are amended to read as follows:

PART 300—INCORPORATION BY REFERENCE

1. Part 300 is revised to read as follows:

Authority: 7 U.S.C. 150ee, 154, 161, 162, and 167; 7 CFR 2.17, 2.51, and 371.2(c).

§ 300.1 Materials incorporated by reference; availability.

(a) *Plant Protection and Quarantine Treatment Manual.* The Plant Protection and Quarantine Treatment Manual, which was reprinted on November 30, 1992, and includes all revisions through March 1995, has been approved for incorporation by reference in 7 CFR chapter III by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(1) The treatments specified in the Plant Protection and Quarantine Treatment Manual and its revisions are required to authorize the movement of certain articles regulated by domestic quarantines (7 CFR parts 301 and 318) and foreign quarantines (7 CFR part 319).

(2) *Availability.* Copies of the Plant Protection and Quarantine Treatment Manual:

(i) Are available for inspection at the Office of the Federal Register Library, 800 North Capitol Street NW, Suite 700, Washington, DC; or,

(ii) May be obtained by writing or calling the Animal and Plant Health Inspection Service, Documents Management Branch, Printing Distribution and Mail Section, 4700 River Road Unit 1, Riverdale, MD 20737-1229, (301) 734-5524; or

(iii) May be obtained from field offices of the Animal and Plant Health Inspection Service, Plant Protection and Quarantine. Addresses of these offices may be found in local telephone directories.

(b) *Dry Kiln Operator's Manual.* The Dry Kiln Operator's Manual, which was published in August 1991 as Agriculture Handbook No. 188 by the United States Department of Agriculture, Forest Service, has been approved for incorporation by reference in 7 CFR chapter III by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(1) The kiln drying schedules specified in the Dry Kiln Operator's Manual provide a method by which certain articles regulated by "Subpart—Logs, Lumber, and Other Unmanufactured Wood Articles" (7 CFR 319.40-1 through 319.40-11) may be imported into the United States.

(2) *Availability.* Copies of the Dry Kiln Operator's Manual are available for inspection at the Office of the Federal Register Library, 800 North Capitol Street NW, Suite 700, Washington, DC, or are for sale as ISBN 0-16-035819-1 by the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.

PART 319—FOREIGN QUARANTINE NOTICES

2. The authority citation for part 319 is revised to read as follows:

Authority: 7 U.S.C. 150dd, 150ee, 150ff, 151–167, 450, 2803, and 2809; 21 U.S.C. 136 and 136a; 7 CFR 2.17, 2.51, and 371.2(c).

Subpart—Citrus Canker and Other Citrus Diseases

3. In § 319.19, paragraphs (a), (b), (c), and (d) are revised to read as follows:

§ 319.19 Notice of quarantine.

(a) In order to prevent the introduction into the United States of the citrus canker disease (*Xanthomonas citri* (Hasse) Dowson) and other citrus diseases, the importation into the United States of plants or any plant part, except fruit and seeds, of all genera, species, and varieties of the subfamilies Aurantioideae, Rutoideae, and Toddaliodeae of the botanical family Rutaceae is prohibited, except as provided in paragraphs (b), (c), and (d) of this section.

(b) Plants or plant parts of all genera, species, and varieties of the subfamilies Aurantioideae, Rutoideae, and Toddaliodeae of the botanical family Rutaceae may be imported into the United States for experimental or scientific purposes in accordance with conditions prescribed by the Administrator, Animal and Plant Health Inspection Service, United States Department of Agriculture.

(c) Plants or plant parts of all genera, species, and varieties of the subfamilies Aurantioideae, Rutoideae, and Toddaliodeae of the botanical family Rutaceae may be imported into Guam in accordance with § 319.37–6.

(d) Plants or plant parts of all genera, species, and varieties of the subfamilies Aurantioideae, Rutoideae, and Toddaliodeae of the botanical family Rutaceae that are regulated articles under §§ 319.40–1 through 319.40–11 may be imported into the United States in accordance with §§ 319.40–1 through 319.40–11 and without restriction by this subpart.

* * * * *

Subpart—Bamboo

4. The title “Subpart—Bamboo” is revised to read “Subpart—Bamboo Capable of Propagation”.

5. In § 319.34, paragraphs (a) and (c) are removed; paragraphs (b) and (d) are redesignated as paragraphs (a) and (b); and newly designated paragraph (a) is revised to read as follows:

§ 319.34 Notice of quarantine.

(a) In order to prevent the introduction into the United States of dangerous plant diseases, including bamboo smut (*Ustilago shiraiana*), the importation into the United States of any variety of bamboo seed, bamboo plants, or bamboo cuttings capable of propagation,¹ including all genera and species of Bambuseae, is prohibited unless imported:

(1) For experimental or scientific purposes by the United States Department of Agriculture;

(2) For export, or for transportation and exportation in bond, in accordance with §§ 352.2 through 352.15 of this chapter; or,

(3) Into Guam in accordance with § 319.37–4(b).

* * * * *

Subpart—Nursery Stock, Plants, Roots, Bulbs, Seeds, and Other Plant Products^{1 2}

6. In § 319.37–1, the definition of “Prohibited article” is revised to read as follows:

§ 319.37–1 Definitions

* * * * *

Prohibited article. Any nursery stock, plant, root, bulb, seed, or other plant product designated in § 319.37–2 (a) or (b), except wood articles regulated under §§ 319.40–1 through 319.40–11, “Subpart—Logs, Lumber, and Other Unmanufactured Wood Articles.”

* * * * *

7. “Subpart—Logs from Chile and New Zealand” of this part is revised to read as follows:

Subpart—Logs, Lumber, and Other Unmanufactured Wood Articles

Sec.

319.40–1 Definitions.

319.40–2 General prohibitions and restrictions; relation to other regulations.

¹ Regulations concerning the importation into the United States of bamboo not capable of propagation are set forth in §§ 319.40–1 through 319.40–11.

² The Plant Protection and Quarantine Program also enforces regulations promulgated under the Endangered Species Act of 1973 (P.L. 93–205, as amended) which contains additional prohibitions and restrictions on importation into the United States of articles subject to this subpart (See 50 CFR parts 17 and 23).

³ One or more common names of articles are given in parentheses after most scientific names (when common names are known) for the purpose of helping to identify the articles represented by such scientific names; however, unless otherwise specified, a reference to a scientific name includes all articles within the category represented by the scientific name regardless of whether the common name or names are as comprehensive in scope as the scientific name.

319.40–3 General permits; articles that may be imported without a specific permit; articles that may be imported without either a specific permit or an importer document.

319.40–4 Application for a permit to import regulated articles; issuance and withdrawal of permits.

319.40–5 Importation and entry requirements for specified articles.

319.40–6 Universal importation options.

319.40–7 Treatments and safeguards.

319.40–8 Processing at facilities operating under compliance agreements.

319.40–9 Inspection and other requirements at port of first arrival.

319.40–10 Costs and charges.

319.40–11 Plant pest risk assessment standards.

Subpart—Logs, Lumber, and Other Unmanufactured Wood Articles**§ 319.40–1 Definitions.**

Administrator. The Administrator of the Animal and Plant Health Inspection Service, United States Department of Agriculture, or any employee of the United States Department of Agriculture delegated to act in his or her stead.

APHIS. The Animal and Plant Health Inspection Service, United States Department of Agriculture.

Bark chips. Bark fragments broken or shredded from log or branch surfaces.

Certificate. A certificate of inspection relating to a regulated article, which is issued by an official authorized by the national government of the country in which the regulated article was produced or grown, which contains a description of the regulated article, which certifies that the regulated article has been inspected, is believed to be free of plant pests, and is believed to be eligible for importation pursuant to the laws and regulations of the United States, and which may contain any specific additional declarations required under this subpart.

Compliance agreement. A written agreement between APHIS and a person engaged in processing, handling, or moving regulated articles, in which the person agrees to comply with requirements contained in the agreement.

Departmental permit. A document issued by the Administrator authorizing the importation of a regulated article for experimental, scientific, or educational purposes.

Free from rot. No more than two percent by weight of the regulated articles in a lot show visual evidence of fructification of fungi or growth of other microorganisms that cause decay and the breakdown of cell walls in the regulated articles.

General permit. A written authorization contained in § 319.40–3

for any person to import the articles named by the general permit, in accordance with the requirements specified by the general permit, without being issued a specific permit.

Humus, compost, and litter. Partially or wholly decayed plant matter.

Import (imported, importation). To bring or move into the territorial limits of the United States.

Importer document. A written declaration signed by the importer of regulated articles, which must accompany the regulated articles at the time of importation, in which the importer accurately declares information about the regulated articles required to be disclosed by § 319.40–2(b).

Inspector. Any individual authorized by the Administrator to enforce this subpart.

Log. The bole of a tree; trimmed timber that has not been sawn further than to form cants.

Loose wood packing material. Excelsior (wood wool), sawdust, and wood shavings, produced as a result of sawing or shaving wood into small, slender, and curved pieces.

Lot. All the regulated articles on a single means of conveyance that are derived from the same species of tree and were subjected to the same treatments prior to importation, and that are consigned to the same person.

Lumber. Logs that have been sawn into boards, planks, or structural members such as beams.

Permit. A specific permit to import a regulated article issued in accordance with § 319.40–4, or a general permit promulgated in § 319.40–3.

Plant pest. Any living stage of any insects, mites, nematodes, slugs, snails, protozoa, or other invertebrate animals, bacteria, fungi, other parasitic plants or reproductive parts of parasitic plants, noxious weeds, viruses, or any organism similar to or allied with any of the foregoing, or any infectious substances, which can injure or cause disease or damage in any plants, parts of plants, or any products of plants.

Port of first arrival. The area (such as a seaport, airport, or land border station) where a person or a means of conveyance first arrives in the United States, and where inspection of regulated articles is carried out by inspectors.

Primary processing. Any of the following processes: cleaning (removal of soil, limbs, and foliage), debarking, rough sawing (bucking or squaring), rough shaping, spraying with fungicide or insecticide sprays, and fumigation.

Regulated article. The following articles, if they are unprocessed or have

received only primary processing: logs; lumber; any whole tree; any cut tree or any portion of a tree, not solely consisting of leaves, flowers, fruits, buds, or seeds; bark; cork; laths; hog fuel; sawdust; painted raw wood products; excelsior (wood wool); wood chips; wood mulch; wood shavings; pickets; stakes; shingles; solid wood packing materials; humus; compost; and litter.

Sealed container; sealable container. A completely enclosed container designed for the storage or transportation of cargo, and constructed of metal or fiberglass, or other rigid material, providing an enclosure which prevents the entrance or exit of plant pests and is accessed through doors that can be closed and secured with a lock or seal. Sealed (sealable) containers are distinct and separable from the means of conveyance carrying them.

Solid wood packing material. Wood packing materials other than loose wood packing materials, used or for use with cargo to prevent damage, including, but not limited to, dunnage, crating, pallets, packing blocks, drums, cases, and skids.

Specific permit. A written document issued by APHIS to the applicant in accordance with § 319.40–4 that authorizes importation of articles in accordance with this subpart and specifies or refers to the regulations applicable to the particular importation.

Treatment Manual. The Plant Protection and Quarantine Treatment Manual, which is incorporated by reference at § 300.1 of this chapter in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

Tropical hardwoods. Hardwood timber species which grow only in tropical climates.

United States. All of the States of the United States, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, the Virgin Islands of the United States, and all other territories and possessions of the United States.

Wood chips. Wood fragments broken or shredded from any wood.

Wood mulch. Bark chips, wood chips, wood shavings, or sawdust intended for use as a protective or decorative ground cover.

§ 319.40–2 General prohibitions and restrictions; relation to other regulations.

(a) *Permit required.* Except for regulated articles exempted from this requirement by paragraph (c) of this section or § 319.40–3, no regulated article may be imported unless a specific permit has been issued for importation of the regulated article in accordance with § 319.40–4, and unless the regulated article meets all other

applicable requirements of this subpart and any requirements specified by APHIS in the specific permit.

(b) *Importer document; documentation of type, quantity, and origin of regulated articles.* Except for regulated articles exempted from this requirement by paragraph (c) of this section or § 319.40–3, no regulated article may be imported unless it is accompanied by an importer document stating the following information. A certificate that contains this information may be used in lieu of an importer document at the option of the importer:

(1) The genus and species of the tree from which the regulated article was derived;

(2) The country, and locality if known, where the tree from which the regulated article was derived was harvested;

(3) The quantity of the regulated article to be imported;

(4) The use for which the regulated article is imported; and

(5) Any treatments or handling of the regulated article required by this subpart that were performed prior to arrival at the port of first arrival.

(c) *Regulation of articles imported for propagation or human consumption.* The requirements of this subpart do not apply to regulated articles that are allowed importation in accordance with § 319.19, "Subpart—Citrus Canker and Other Citrus Diseases"; § 319.34, "Subpart—Bamboo Capable of Propagation"; or §§ 319.37 through 319.37–14, "Subpart—Nursery Stock, Plants, Roots, Bulbs, Seeds, and Other Plant Products"; or to regulated articles imported for human consumption that are allowed importation in accordance with §§ 319.56 through 319.56–8, "Subpart—Fruits and Vegetables."

(d) *Regulated articles imported for experimental, scientific or educational purposes.* Any regulated article may be imported without further restriction under this subpart if:

(1) Imported by the United States Department of Agriculture for experimental, scientific, or educational purposes;

(2) Imported pursuant to a Departmental permit issued by APHIS for the regulated article prior to its importation and kept on file at the port of first arrival; and

(3) Imported under conditions specified on the Departmental permit and found by the Administrator to be adequate to prevent the introduction into the United States of plant pests.

(e) *Designation of additional regulated articles.* An inspector may designate any article as a regulated article by giving written notice of the

designation to the owner or person in possession or control of the article. APHIS will implement rulemaking to add articles designated as regulated articles to the definition of regulated article in § 319.40-1 if importation of the article appears to present a recurring significant risk of introducing plant pests. Inspectors may designate an article as a regulated article after determining that:

- (1) The article was imported in the same container or hold as a regulated article;
- (2) Other articles of the same type imported from the same country have been found to carry plant pests; or
- (3) The article appears to be contaminated with regulated articles or soil.

§ 319.40-3 General permits; articles that may be imported without a specific permit; articles that may be imported without either a specific permit or an importer document.

(a) *Canada and Mexico.* APHIS hereby issues a general permit to import articles authorized by this paragraph. Regulated articles from Canada and from states in Mexico adjacent to the United States border, other than regulated articles of the subfamilies Aurantioideae, Rutoideae, and Toddalioidae of the botanical family Rutaceae, may be imported without restriction under this subpart, except that they must be accompanied by an importer document stating that the regulated articles are derived from trees harvested in, and have never been moved outside, Canada or states in Mexico adjacent to the United States border, and except that they are subject to the inspection and other requirements in § 319.40-9.

(b) *Solid wood packing materials—(1) Free of bark; used with non-regulated articles.* APHIS hereby issues a general permit to import regulated articles authorized by this paragraph. Solid wood packing materials that are completely free of bark and are in actual use at the time of importation as packing materials for articles which are not regulated articles may be imported without restriction under this subpart, except that:

- (i) The solid wood packing materials are subject to the inspection and other requirements in § 319.40-9; and
- (ii) The solid wood packing materials must be accompanied at the time of importation by an importer document, stating that the solid wood packing materials are totally free from bark, and apparently free from live plant pests.

(2) *Free of bark; used with regulated articles.* APHIS hereby issues a general permit to import regulated articles

authorized by this paragraph. Solid wood packing materials that are completely free of bark and are in actual use at the time of importation as packing materials for regulated articles may be imported without restriction under this subpart, except that:

- (i) The solid wood packing materials are subject to the inspection and other requirements in § 319.40-9;
- (ii) The solid wood packing materials must be accompanied at the time of importation by an importer document, stating that the solid wood packing materials are totally free from bark, and apparently free from live plant pests; and
- (iii) The solid wood packing materials must be accompanied at the time of importation by an importer document, stating that the solid wood packing materials have been heat treated, fumigated, or treated with preservatives in accordance with § 319.40-7, or meet all the importation and entry conditions required for the regulated article the solid wood packing material is used to move.

(3) *Not free of bark; used with regulated or nonregulated articles.* APHIS hereby issues a general permit to import regulated articles authorized by this paragraph. Solid wood packing materials that are not completely free of bark and are in actual use as packing at the time of importation may be imported without restriction under this subpart, except that:

- (i) The solid wood packing materials are subject to the inspection and other requirements in § 319.40-9;
- (ii) The solid wood packing materials must be accompanied at the time of importation by an importer document, stating that the solid wood packing materials have been heat treated, fumigated, or treated with preservatives in accordance with § 319.40-7.

(4) *Pallets moved as cargo.* APHIS hereby issues a general permit to import regulated articles authorized by this paragraph. Pallets that are completely free of bark and that are not in actual use as packing at the time of importation (i.e., pallets moved as cargo) may be imported without restriction under this subpart, except that:

- (i) The pallets are subject to the inspection and other requirements in § 319.40-9; and
- (ii) The pallets are accompanied by an importer document stating that the pallets were previously eligible for importation in accordance with paragraph (b) of this section and have not had wood added to them since that use. Solid wood packing materials other than pallets that are imported as cargo

must be imported in accordance with the requirements of this subpart for raw lumber.

(c) *Loose wood packing materials.* APHIS hereby issues a general permit to import regulated articles authorized by this paragraph. Loose wood packing materials (whether in use as packing or imported as cargo) that are dry may be imported subject to the inspection and other requirements in § 319.40-9 and without further restriction under this subpart.

(d) *Bamboo timber.* APHIS hereby issues a general permit to import regulated articles authorized by this paragraph. Bamboo timber which is free of leaves and seeds and has been sawn or split lengthwise and dried may be imported subject to the inspection and other requirements in § 319.40-9 and without further restriction under this subpart.

(e) *Regulated articles the permit process has determined to present no plant pest risk.* Regulated articles for which a specific permit has been issued in accordance with § 319.40-4(b)(2)(i) may be imported without other restriction under this subpart, except that they are subject to the inspection and other requirements in § 319.40-9.

§ 319.40-4 Application for a permit to import regulated articles; issuance and withdrawal of permits.

(a) *Application procedure.* A written application for a permit¹ must be submitted to the Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Port Operations Permit Unit, 4700 River Road Unit 136, Riverdale, MD 20737-1236. The completed application must include the following information:

- (1) The specific type of regulated article to be imported, including the genus and species name of the tree from which the regulated article was derived;
- (2) Country, and locality if known, where the tree from which the regulated article was derived was harvested;
- (3) The quantity of the regulated article to be imported;
- (4) A description of any processing, treatment or handling of the regulated article to be performed prior to importation, including the location where any processing or treatment was or will be performed and the names and dosage of any chemicals employed in treatments;

¹ Application forms for permits are available without charge from the Administrator, c/o the Permit Unit, Plant Protection and Quarantine, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, 4700 River Road, Riverdale, MD 20737, or local offices of Plant Protection and Quarantine, which are listed in telephone directories.

(5) A description of any processing, treatment, or handling of the regulated article intended to be performed following importation, including the location where any processing or treatment will be performed and the names and dosage of any chemicals employed in treatments;

(6) Whether the regulated article will or will not be imported in a sealed container or in a hold;

(7) The means of conveyance to be used to import the regulated article;

(8) The intended port of first arrival in the United States of the regulated article, and any subsequent ports in the United States at which regulated articles may be unloaded;

(9) The destination and general intended use of the regulated article;

(10) The name and address of the applicant and, if the applicant's address is not within the United States, the name and address of an agent in the United States whom the applicant names for acceptance of service of process; and

(11) A statement certifying the applicant as the importer of record.

(b) *Review of application and issuance of permit.* After receipt and review of the application, APHIS shall determine whether it appears that the regulated article at the time of importation will meet either the specific importation requirements in § 319.40-5 or the universal importation requirements in § 319.40-6.

(1) If it appears that the regulated article proposed for importation will meet the requirements of either § 319.40-5 or § 319.40-6, a permit stating the applicable conditions for importation under this subpart shall be issued for the importation of the regulated article identified in the application.

(2) If it appears that the regulated article proposed for importation will not meet the requirements of either § 319.40-5 or § 319.40-6 because these sections do not address the particular regulated article identified in the application, APHIS shall review the application by applying the plant pest risk assessment standards specified in § 319.40-11.

(i) If this review reveals that importation of the regulated article under a permit and subject to the inspection and other requirements in § 319.40-9, but without any further conditions, will not result in the introduction of plant pests into the United States, a permit for importation of the regulated article shall be issued. The permit may only be issued in unique and unforeseen circumstances

when the importation of the regulated article is not expected to recur.

(ii) If this review reveals that the regulated article may be imported under conditions that would reduce the plant pest risk to an insignificant level, APHIS may implement rulemaking to add the additional conditions to this subpart, and after the regulations are effective, may issue a permit for importation of the regulated article.

(3) No permit will be issued to an applicant who has had a permit withdrawn under paragraph (d) of this section during the 12 months prior to receipt of the permit application by APHIS, unless the withdrawn permit has been reinstated upon appeal.

(c) *Permit does not guarantee eligibility for import.* Even if a permit has been issued for the importation of a regulated article, the regulated article may be imported only if all applicable requirements of this subpart are met and only if an inspector at the port of first arrival determines that no emergency measures pursuant to the Federal Plant Pest Act or other measures pursuant to the Plant Quarantine Act are necessary with respect to the regulated article.²

(d) *Denial and withdrawal of permits.* Any permit which has been issued may be withdrawn by an inspector or the Administrator if he or she determines that the person to whom the permit was issued has violated any requirement of this subpart. If the withdrawal is oral, the decision to withdraw the permit and the reasons for the withdrawal of the permit shall be confirmed in writing as promptly as circumstances permit. Any person whose permit has been denied or withdrawn may appeal the decision in writing to the Administrator within 10 days after receiving the written notification of the withdrawal. The appeal shall state all of the facts and reasons upon which the person relies to show that the permit was wrongfully

² Section 105(a) of the Federal Plant Pest Act (7 U.S.C. 150dd(a)) provides, among other things, that the Secretary of Agriculture may, whenever he deems it necessary as an emergency measure in order to prevent the dissemination of any plant pest new to or not theretofore known to be widely prevalent or distributed within and throughout the United States, seize, quarantine, treat, apply other remedial measures to, destroy, or dispose of, in such manner as he deems appropriate, subject to section 105(d) of the Federal Plant Pest Act (7 U.S.C. 150dd(d)), any product or article, including any article subject to this subpart, which is moving into or through the United States, and which he has reason to believe is infested with any such plant pest at the time of the movement, or which has moved into the United States, and which he has reason to believe was infested with any such plant pest at the time of the movement. Section 10 of the Plant Quarantine Act (7 U.S.C. 164a) and section 107 of the Federal Plant Pest Act (7 U.S.C. 150ff) also authorize measures against regulated articles which are not in compliance with this subpart.

denied or withdrawn. The Administrator shall grant or deny the appeal, in writing, stating the reasons for granting or denying the appeal as promptly as circumstances permit. If there is a conflict as to any material fact and the person from whom the permit is withdrawn requests a hearing, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing shall be adopted by the Administrator.

§ 319.40-5 Importation and entry requirements for specified articles.

(a) *Bamboo timber.* Bamboo timber consisting of whole culms or canes may be imported into Guam or the Northern Mariana Islands subject to inspection and other requirements of § 319.40-9. Bamboo timber consisting of whole culms or canes that are completely dry as evidenced by lack of moisture in node tissue may be imported into any part of the United States subject to inspection and other requirements of § 319.40-9.

(b) *Monterey pine logs and lumber from Chile and New Zealand; Douglas-fir logs and lumber from New Zealand—*

(1) *Logs.* (i) *Requirements prior to importation.* Monterey or Radiata pine (*Pinus radiata*) logs from Chile or New Zealand and Douglas-fir (*Pseudotsuga menziesii*) logs from New Zealand that are accompanied by a certificate stating that the logs meet the requirements of paragraph (b)(1)(i)(A) through (D) of this section, and that are consigned to a facility in the United States that operates in accordance with § 319.40-8, may be imported in accordance with paragraphs (b)(1)(i)(A) through (b)(1)(iii) of this section.

(A) The logs must be from live healthy trees which are apparently free of plant pests, plant pest damage, and decay organisms.

(B) The logs must be debarked in accordance with § 319.40-7(b) prior to fumigation.

(C) The logs and any solid wood packing materials to be used with the logs during shipment to the United States must be fumigated in accordance with § 319.40-7(f)(1), within 45 days following the date the trees are felled and prior to arrival of the logs in the United States, in the holds or in sealable containers. Fumigation must be conducted in the same sealable container or hold in which the logs and solid wood packing materials are exported to the United States.

(D) During shipment to the United States, no other regulated article is permitted on the means of conveyance with the logs, unless the logs and the other regulated articles are in separate

holds or separate sealed containers, or, if the logs and other regulated articles are mixed in a hold or sealed container, the other regulated articles either have been heat treated with moisture reduction in accordance with § 319.40-7(d), or have been fumigated in the hold or sealable container in accordance with paragraph (b)(1)(i)(C) of this section.

(ii) *Requirements upon arrival in the United States.* The following requirements apply upon arrival of the logs in the United States.

(A) The logs must be kept segregated from other regulated articles from the time of discharge from the means of conveyance until the logs are completely processed at a facility in the United States that operates under a compliance agreement in accordance with § 319.40-8.

(B) The logs must be moved from the port of first arrival to the facility that operates under a compliance agreement in accordance with § 319.40-8 by as direct a route as reasonably possible.

(iii) *Requirements at the processing facility.* The logs must be consigned to a facility operating under a compliance agreement in accordance with § 319.40-8 that includes the following requirements:

(A) Logs or any products generated from logs, including lumber, must be heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d).

(B) The logs, including sawdust, wood chips, or other products generated from the logs in the United States, must be processed in accordance with paragraph (b)(1)(iii) of this section within 60 days from the time the logs are released from the port of first arrival.

(C) Sawdust, wood chips, and waste generated by sawing or processing the logs must be disposed of by burning, heat treatment in accordance with § 319.40-7(c), heat treatment with moisture reduction in accordance with § 319.40-7(d), or other processing that will destroy any plant pests associated with the sawdust, wood chips, and waste. Composting and use of the sawdust, wood chips, and waste as mulch are prohibited unless composting and use as mulch are preceded by fumigation in accordance with § 319.40-7(f)(3), heat treatment in accordance with § 319.40-7(c), or heat treatment with moisture reduction in accordance with § 319.40-7(d). Wood chips, sawdust, and waste may be moved in enclosed trucks for processing at another facility operating under a compliance agreement in accordance with § 319.40-8.

(2) *Raw lumber.* Raw lumber, including solid wood packing materials imported as cargo, from Chile or New Zealand derived from Monterey or Radiata pine (*Pinus radiata*) logs and raw lumber from New Zealand derived from Douglas-fir (*Pseudotsuga menziesii*) logs may be imported in accordance with paragraphs (b)(2) (i) and (ii) of this section.

(i) During shipment to the United States, no other regulated article (other than solid wood packing materials) is permitted on the means of conveyance with the raw lumber, unless the raw lumber and the other regulated articles are in separate holds or separate sealed containers; *Except for mixed shipments of logs and raw lumber fumigated in accordance with § 319.40-7(f)(2) and moved in accordance with paragraph (b)(1)(i)(D) of this section.* Raw lumber on the vessel's deck must be in a sealed container.

(ii) The raw lumber must be consigned to a facility operating under a compliance agreement in accordance with § 319.40-8 that requires the raw lumber to be heat treated in accordance with § 319.40-7(c) or heat treated with moisture reduction in accordance with § 319.40-7(d) before any cutting, planing, or sawing of the raw lumber, and within 30 days from the time the lumber is released from the port of first arrival.

(c) *Tropical hardwoods.*—(1) *Debarked.* Tropical hardwood logs and lumber that have been debarked in accordance with § 319.40-7(b) may be imported subject to the inspection and other requirements of § 319.40-9.

(2) *Not debarked.* Tropical hardwood logs that have not been debarked may be imported if fumigated in accordance with § 319.40-7(f)(1) prior to arrival in the United States.

(3) *Not debarked; small lots.* Tropical hardwood logs that have not been debarked may be imported into the United States, other than into Hawaii, Puerto Rico, or the Virgin Islands of the United States, if imported in a lot of 15 or fewer logs and subject to the inspection and other requirements of § 319.40-9.

(d) *Temperate hardwoods.* Temperate hardwood logs and lumber (with or without bark) from all places except places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer may be imported if fumigated in accordance with § 319.40-7(f) prior to arrival in the United States and subject to the inspection and other requirements of § 319.40-9.

(e) *Regulated articles associated with exclusively tropical climate pests.* Regulated articles that have been

identified by a plant pest risk assessment as associated solely with plant pests that can successfully become established only in tropical or subtropical climates may be imported if:

(1) The regulated article is imported only to a destination in the continental United States; and,

(2) the regulated article is not imported into any tropical or subtropical areas of the United States specified in the permit.

(f) Cross-ties (railroad ties) from all places except places in Asia that are east of 60° East Longitude and north of the Tropic of Cancer may be imported if completely free of bark and accompanied by an importer document stating that the cross-ties will be pressure treated within 30 days following the date of importation.

§ 319.40-6 Universal importation options.

(a) *Logs.* Logs may be imported if prior to importation the logs have been debarked in accordance with § 319.40-7(b) and heat treated in accordance with § 319.40-7(c). During the entire interval between treatment and export, the logs must be stored and handled in a manner which excludes any access to the logs by plant pests.

(b) *Lumber.*—(1) *Heat treated or heat treated with moisture reduction.* Lumber that prior to importation has been heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d), may be imported in accordance with paragraphs (b)(1) (i) and (ii) of this section.

(i) During shipment to the United States, no other regulated article (other than solid wood packing materials) is permitted on the means of conveyance with the lumber, unless the lumber and the other regulated articles are in separate holds or separate sealed containers, or, if the lumber and other regulated articles are mixed in a hold or sealed container, all the regulated articles have been heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d). Lumber on the vessel's deck must be in a sealed container, unless it has been heat treated with moisture reduction in accordance with § 319.40-7(d).

(ii) If lumber has been heat treated in accordance with § 319.40-7(c), that fact must be stated on the importer document, or by a permanent marking on each piece of lumber in the form of the letters "HT" or the words "Heat Treated." If lumber has been heat treated with moisture reduction in accordance with § 319.40-7(d), that fact must be stated on the importer

document, or by a permanent marking, on each piece of lumber or on the cover of bundles of lumber, in the form of the letters "KD" or the words "Kiln Dried."

(2) *Raw lumber.* Raw lumber, including solid wood packing materials imported as cargo, from all places except places in Asia that are wholly east of 60° East Longitude and north of the Tropic of Cancer may be imported in accordance with paragraphs (b)(2) (i) and (ii) of this section.

(i) During shipment to the United States, no other regulated article (other than solid wood packing materials) is permitted on the means of conveyance with the raw lumber, unless the raw lumber and the other regulated articles are in separate holds or separate sealed containers. Raw lumber on the vessel's deck must be in a sealed container.

(ii) The raw lumber must be consigned to a facility operating under a compliance agreement in accordance with § 319.40-8 that requires the raw lumber to be heat treated in accordance with § 319.40-7(c) or heat treated with moisture reduction in accordance with § 319.40-7(d), within 30 days from the time the lumber is released from the port of first arrival. Heat treatment must be completed before any cutting, planing, or sawing of the raw lumber.

(c) *Wood chips and bark chips.* Wood chips and bark chips from any place except countries in Asia that are wholly east of 60° East Longitude and wholly or in part north of the Tropic of Cancer may be imported in accordance with this paragraph.

(1) The wood chips or bark chips must be accompanied by an importer document stating that the wood chips or bark chips were either:

(i) Derived from live, healthy, tropical species of plantation-grown trees grown in tropical areas; or

(ii) Fumigated with methyl bromide in accordance with § 319.40-7(f)(3), heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d).

(2) During shipment to the United States, no other regulated articles (other than solid wood packing materials) are permitted in the holds or sealed containers carrying the wood chips or bark chips. Wood chips or bark chips on the vessel's deck must be in a sealed container; *Except that:* If the wood chips or bark chips are derived from live, healthy, plantation-grown trees in tropical areas, they may be shipped on deck if no other regulated articles are present on the vessel, and the wood chips or bark chips are completely covered by a tarpaulin during the entire journey directly to the United States.

(3) The wood chips or bark chips must be free from rot at the time of importation, unless accompanied by an importer document stating that the entire lot was fumigated with methyl bromide in accordance with § 319.40-7(f)(3), heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d).

(4) Wood chips or bark chips imported in accordance with this paragraph must be consigned to a facility operating under a compliance agreement in accordance with § 319.40-8. The wood chips or bark chips must be burned, heat treated in accordance with § 319.40-7(c), heat treated with moisture reduction in accordance with § 319.40-7(d), or otherwise processed in a manner that will destroy any plant pests associated with the wood chips or bark chips, within 30 days of arrival at the facility. If the wood chips or bark chips are to be used for mulching or composting, they must first be fumigated in accordance with § 319.40-7(f)(3), heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d).

(d) *Wood mulch, humus, compost, and litter.* Wood mulch, humus, compost, and litter may be imported if accompanied by an importer document stating that the wood mulch, humus, compost, or litter was fumigated in accordance with § 319.40-7(f)(3), heat treated in accordance with § 319.40-7(c), or heat treated with moisture reduction in accordance with § 319.40-7(d).

(e) *Cork and bark.* Cork and cork bark, cinnamon bark, and other bark to be used for food, manufacture of medicine, or chemical extraction may be imported if free from rot at the time of importation and subject to the inspection and other requirements of § 319.40-9.

§ 319.40-7 Treatments and safeguards.

(a) *Certification of treatments or safeguards.* If APHIS determines that a document required for the importation of regulated articles is inaccurate, the regulated articles which are the subject of the certificate or other document shall be refused entry into the United States. In addition, APHIS may determine not to accept any further certificates for the importation of regulated articles in accordance with this subpart from a country in which an inaccurate certificate is issued, and APHIS may determine not to allow the importation of any or all regulated articles from any such country, until corrective action acceptable to APHIS

establishes that certificates issued in that country will be accurate.

(b) *Debarking.* Except for raw lumber, no more than 2 percent of the surface of all regulated articles in a lot may retain bark, with no single regulated article retaining bark on more than 5 percent of its surface. For raw lumber, debarking must remove 100 percent of the bark.

(c) *Heat treatment.* Heat treatment must be performed only at a facility where APHIS or an inspector authorized by the Administrator and the national government of the country in which the facility is located has inspected the facility and determined that its operation complies with the standards of this paragraph. Heat treatment procedures may employ steam, hot water, kilns, exposure to microwave energy, or any other method (e.g., the hot water and steam techniques used in veneer production) that raises the temperature of the center of each treated regulated article to at least 71.1 °C and maintains the regulated article at that center temperature for at least 75 minutes. For regulated articles heat treated prior to arrival in the United States, during the entire interval between treatment and export the regulated article must be stored, handled, or safeguarded in a manner which excludes any infestation of the regulated article by plant pests.

(d) *Heat treatment with moisture reduction.* (1) Heat treatment with moisture reduction may employ:

(i) Kiln drying conducted in accordance with the schedules prescribed for the regulated article in the Dry Kiln Operator's Manual, Agriculture Handbook 188, which is incorporated by reference at § 300.1 of this chapter; or

(ii) Dry heat, exposure to microwave energy, or any other method that raises the temperature of the center of each treated regulated article to at least 71.1 °C, maintains the regulated articles at that center temperature for at least 75 minutes, and reduces the moisture content of the regulated article to 20 percent or less as measured by an electrical conductivity meter.

(2) For regulated articles heat treated with moisture reduction prior to arrival in the United States, during the entire interval between treatment and export the regulated article must be stored, handled, or safeguarded in a manner which excludes any infestation of the regulated article by plant pests.

(e) *Surface pesticide treatments.* All United States Environmental Protection Agency registered surface pesticide treatments are authorized for regulated articles imported in accordance with this subpart. Surface pesticide

treatments must be conducted in accordance with label directions approved by the United States Environmental Protection Agency. When used on heat treated logs, a surface pesticide treatment must be first applied within 48 hours following heat treatment. The surface pesticide treatment must be repeated at least every 30 days during storage of the regulated article, with the final treatment occurring no more than 30 days prior to departure of the means of conveyance that carries the regulated articles to the United States.

(f) *Methyl bromide fumigation.* The following minimum standards for methyl bromide fumigation treatment are authorized for the regulated articles listed in paragraphs (f)(1) through (f)(3) of this section. Any method of fumigation that meets or exceeds the specified temperature/time/concentration products is acceptable.

(1) *Logs.* (i) *T-312 schedule.* The entire log and the ambient air must be at a temperature of 5 °C or above throughout fumigation. The fumigation must be conducted using schedule T-312 contained in the Treatment Manual. In lieu of the schedule T-312 methyl bromide concentration, fumigation may be conducted with an initial methyl bromide concentration of at least 240 g/m³ with exposure and concentration levels adequate to provide a concentration-time product of at least 17,280 gram-hours calculated on the initial methyl bromide concentration.

(ii) *T-404 schedule.* The entire log and the ambient air must be at a temperature of 5 °C or above throughout fumigation. The fumigation must be conducted using schedule T-404 contained in the Treatment Manual. In lieu of the schedule T-404 methyl bromide concentration, fumigation may be conducted with an initial methyl bromide concentration of at least 120 g/m³ with exposure and concentration levels adequate to provide a concentration-time product of at least 1920 gram-hours calculated on the initial methyl bromide concentration.

(2) *Lumber.* The lumber and the ambient air must be at a temperature of 5 °C or above throughout fumigation. The fumigation must be conducted using schedule T-404 contained in the Treatment Manual. In lieu of the schedule T-404 methyl bromide concentration, fumigation may be conducted with an initial methyl bromide concentration of at least 120 g/m³ with exposure and concentration levels adequate to provide a concentration-time product of at least 1920 gram-hours calculated on the initial methyl bromide concentration.

(3) *Regulated articles other than logs or lumber.* (i) If the ambient air and the regulated articles other than logs or lumber are at a temperature of 21 °C or above throughout fumigation, the fumigation must be conducted using schedule T-404 contained in the Treatment Manual. In lieu of the schedule T-404 methyl bromide concentration, fumigation may be conducted with an initial methyl bromide concentration of at least 48 g/m³ with exposure and concentration levels adequate to provide a concentration-time product of at least 760 gram-hours calculated on the initial methyl bromide concentration.

(ii) If the ambient air and the regulated articles other than logs or lumber are at a temperature of 4.5–20.5 °C throughout fumigation, the fumigation must be conducted using schedule T-404 contained in the Treatment Manual. In lieu of the schedule T-404 methyl bromide concentration, fumigation may be conducted with an initial methyl bromide concentration of at least 120 g/m³ with exposure and concentration levels adequate to provide a concentration-time product of at least 1920 gram-hours calculated on the initial methyl bromide concentration.

(g) *Preservatives.* All preservative treatments that use a preservative product that is registered by the United States Environmental Protection Agency are authorized for treatment of regulated articles imported in accordance with this subpart. Preservative treatments must be performed in accordance with label directions approved by the United States Environmental Protection Agency.

§ 319.40–8 Processing at facilities operating under compliance agreements.

(a) Any person who operates a facility in which imported regulated articles are processed may enter into a compliance agreement to facilitate the importation of regulated articles under this subpart. The compliance agreement shall specify the requirements necessary to prevent spread of plant pests from the facility, requirements to ensure the processing method effectively destroys plant pests, and the requirements for the application of chemical materials in accordance with the Treatment Manual. The compliance agreement shall also state that inspectors must be allowed access to the facility to monitor compliance with the requirements of the compliance agreement and of this subpart. Compliance agreement forms may be obtained from the Administrator or an inspector.

(b) Any compliance agreement may be canceled by the inspector who is supervising its enforcement, orally or in writing, whenever the inspector finds that the person who entered into the compliance agreement has failed to comply with the conditions of the compliance agreement. If the cancellation is oral, the decision to cancel the compliance agreement and the reasons for cancellation of the compliance agreement shall be confirmed in writing, as promptly as circumstances permit. Any person whose compliance agreement has been canceled may appeal the decision in writing to the Administrator within 10 days after receiving written notification of the cancellation. The appeal shall state all of the facts and reasons upon which the person relies to show that the compliance agreement was wrongfully canceled. The Administrator shall grant or deny the appeal, in writing, stating the reasons for granting or denying the appeal, as promptly as circumstances permit. If there is a conflict as to any material fact and the person whose compliance agreement has been canceled requests a hearing, a hearing shall be held to resolve the conflict. Rules of practice concerning the hearing will be adopted by the Administrator.

§ 319.40–9 Inspection and other requirements at port of first arrival.

(a) *Procedures for all regulated articles.* (1) All imported regulated articles shall be inspected at the port of first arrival. If the inspector finds signs of plant pests on or in the regulated article, or finds that the regulated article may have been associated with other articles infested with plant pests, the regulated article shall be cleaned or treated as required by an inspector, and the regulated article and any products of the regulated article shall also be subject to reinspection, cleaning, and treatment at the option of an inspector at any time and place before all applicable requirements of this subpart have been accomplished.

(2) Regulated articles shall be assembled for inspection at the port of first arrival, or at any other place prescribed by an inspector, at a place and time and in a manner designated by an inspector.

(3) If an inspector finds that an imported regulated article is so infested with a plant pest that, in the judgment of the inspector, the regulated article cannot be cleaned or treated, or contains soil or other prohibited contaminants, the entire lot may be refused entry into the United States.

(4) No person shall move any imported regulated article from the port

of first arrival unless and until an inspector notifies the person, in writing or through an electronic database, that the regulated article:

(i) Is in compliance with all applicable regulations and has been inspected and found to be apparently free of plant pests;³ or,

(ii) Has been inspected and the inspector requires reinspection, cleaning, or treatment of the regulated article at a place other than the port of first arrival.

(b) *Notice of arrival; visual examination of regulated articles at port of first arrival.* (1) At least 7 days prior to the expected date of arrival in the United States of a shipment of regulated articles imported in accordance with this subpart, the permittee or his or her agent must notify the APHIS Officer in Charge at the port of arrival of the date of expected arrival. The address and telephone number of the APHIS Officer in Charge will be specified in any specific permit issued by APHIS⁴. This notice may be in writing or by telephone. The notice must include the number of any specific permit issued for the regulated articles; the name, if any, of the means of conveyance carrying the regulated articles; the type and quantity of the regulated articles; the expected date of arrival; the country of origin of the regulated articles; the name and the number, if any, of the dock or area where the regulated articles are to be unloaded; and the name of the importer or broker at the port of arrival.

(2) Imported regulated articles which have been debarked in accordance with § 319.40-7(b) and can be safely and practically inspected will be visually examined for plant pests by an inspector at the port of first arrival. If plant pests are found on or in the regulated articles or if the regulated article cannot be safely and practically inspected, the regulated articles must be treated in accordance with the Treatment Manual.

(c) *Marking and identity of regulated articles.* Any regulated article, at the time of importation shall bear on the outer container (if in a container), on the regulated article (if not in a container), or on a document accompanying the regulated article the following information:

(1) General nature and quantity of the regulated articles;

(2) Country and locality, if known, where the tree from which the regulated article was derived was harvested;

(3) Name and address of the person importing the regulated article;

(4) Name and address of consignee of the regulated article;

(5) Identifying shipper's mark and number; and

(6) Number of the permit (if one was issued) authorizing the importation of the regulated article into the United States.

(d) *Sampling for plant pests at port of first arrival.* Any imported regulated article may be sampled for plant pests at the port of first arrival. If an inspector finds it necessary to order treatment of a regulated article at the port of first arrival, any sampling will be done prior to treatment.

§ 319.40-10 Costs and charges.

The services of an inspector during regularly assigned hours of duty and at the usual places of duty shall be furnished without cost to the importer.⁵ The inspector may require the importer to furnish any labor, chemicals, packing materials, or other supplies required in handling regulated articles under this subpart. APHIS will not be responsible for any costs or charges, other than those identified in this section.

§ 319.40-11 Plant pest risk assessment standards.

When evaluating a request to import a regulated article not allowed importation under this subpart, or a request to import a regulated article under conditions other than those prescribed by this subpart, APHIS will conduct the following analysis to determine the plant pest risks associated with each requested importation in order to determine whether or not to issue a permit under this subpart or to propose regulations establishing conditions for the importation into the United States of the regulated article.

(a) *Collecting commodity information.* (1) APHIS will evaluate the application for information describing the regulated article and the origin, processing, treatment, and handling of the regulated article; and

(2) APHIS will evaluate history of past plant pest interceptions or introductions (including data from foreign countries) associated with the regulated article.

(b) *Cataloging quarantine pests.* For the regulated article specified in an application, APHIS will determine what

plant pests or potential plant pests are associated with the type of tree from which the regulated article was derived, in the country and locality from which the regulated article is to be exported. A plant pest that meets one of the following criteria is a quarantine pest and will be further evaluated in accordance with paragraph (c) of this section:

(1) Non-indigenous plant pest not present in the United States;

(2) Non-indigenous plant pest, present in the United States and capable of further dissemination in the United States;

(3) Non-indigenous plant pest that is present in the United States and has reached probable limits of its ecological range, but differs genetically from the plant pest in the United States in a way that demonstrates a potential for greater damage potential in the United States;

(4) Native species of the United States that has reached probable limits of its ecological range, but differs genetically from the plant pest in the United States in a way that demonstrates a potential for greater damage potential in the United States; or

(5) Non-indigenous or native plant pest that may be able to vector another plant pest that meets one of the criteria in paragraphs (b)(1) through (4) of this section.

(c) *Determining which quarantine pests to assess.* (1) APHIS will divide quarantine pests identified in paragraph (b) of this section into groups depending upon where the plant pest is most likely to be found. The plant pests would be grouped as follows:

(i) Plant pests found on the bark;

(ii) Plant pests found under the bark; and

(iii) Plant pests found in the wood.

(2) APHIS will subdivide each of the groups in paragraph (c)(1) of this section into associated taxa.

(3) APHIS will rank the plant pests in each group in paragraph (c)(2) of this section according to plant pest risk, based on the available biological information and demonstrated plant pest importance.

(4) APHIS will identify any plant pests ranked in paragraph (c)(3) of this section for which plant pest risk assessments have previously been performed in accordance with this section. APHIS will conduct individual plant pest risk assessments for the remaining plant pests, starting with the highest ranked plant pest(s) in each group.

(5) The number of plant pests in each group to be evaluated through individual plant pest risk assessment will be based on biological similarities

³ Certain regulated articles may also be subject to §§ 319.56 through 319.56-8, "Subpart—Fruits and Vegetables," or to Noxious Weed Act regulations under part 360 of this chapter, or to Endangered Species Act regulations under parts 355 and 356 of this chapter and 50 CFR parts 17 and 23.

⁴ A list of APHIS Officers in Charge may be obtained from the Administrator, c/o Port Operations, Plant Protection and Quarantine, Animal and Plant Health Inspection Service, 4700 River Road, Riverdale, MD 20737.

⁵ Provisions relating to costs for other services of an inspector are contained in part 354 of this chapter.

of members of the group as they relate to measures taken in connection with the importation of the regulated article to mitigate the plant pest risk associated with the regulated article. For example, if the plant pest risk assessment for the highest ranked plant pest indicates a need for a mitigation measure that would result in the same reduction of risk for other plant pests ranked in the group, the other members need not be subjected to individual plant pest risk assessment.

(d) *Conducting individual plant pest risk assessments.* APHIS will evaluate each of the plant pests identified in paragraph (c)(4) of this section by:

(1) Estimation of the probability of the plant pest being on, with, or in the regulated article at the time of importation;

(2) Estimation of the probability of the plant pest surviving in transit on the regulated article and entering the United States undetected;

(3) Estimation of the probability of the plant pest colonizing once it has entered into the United States;

(4) Estimation of the probability of the plant pest spreading beyond any colonized area; and

(5) Estimation of the damage to plants that could be expected upon introduction and dissemination within the United States of the plant pest.

(e) *Estimating unmitigated overall plant pest risk.* APHIS will develop an estimation of the overall plant pest risk associated with importing the regulated article based on compilation of individual plant pest risk assessments performed in accordance with paragraph (d) of this section.

(f) *Evaluating available requirements to determine whether they would allow safe importation of the regulated article.* The requirements of this subpart, and any other requirements relevant to the regulated article and plant pests involved, will be compared with the individual plant pest risk assessments in order to determine whether particular conditions on the importation of the regulated article would reduce the plant pest risk to an insignificant level. If APHIS determines that the imposition of particular conditions on the importation of the regulated article could reduce the plant pest risk to an insignificant level, and determines that sufficient APHIS resources are available to implement or ensure implementation of the conditions, APHIS will implement rulemaking to allow importation of the requested regulated article under the conditions identified by the plant pest risk assessment process.

Subpart—Packing Materials

§ 319.69 [Amended]

8. The introductory text to § 319.69 is removed.

9. In § 319.69, paragraph (a), the phrase "On and after July 1, 1933, the" is removed and the word "The" is added in its place.

10. In § 319.69, paragraph (b), the phrase "On and after June 8, 1953, the" is removed and the word "The" is added in its place.

11. In § 319.69, paragraph (b)(3) is removed, and paragraphs (b)(4) and (b)(5) are redesignated as paragraphs (b)(3) and (b)(4), respectively.

§ 319.69a [Amended]

12. In § 319.69a, paragraph (a) is amended by removing the reference "(b)(1), (3), and (4)" and adding the reference "(b)(1) and (3)" in its place.

Done in Washington, DC, this 19th day of May 1995.

Terry L. Medley,

Acting Administrator, Animal and Plant Health Inspection Service.

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